New York State Museum Bulletin

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No. 197 ALBANY, N. Y. MAY 1, 1917

The University of the State of New York

New York State Museum

JOHN M. CLARKE, Director

HOMER D. HOUSE, State Botanist

REPORT OF THE STATE BOTANIST 1916

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ALBANY

THE UNIVERSITY OF THE STATE OF NEW YORK

1918

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COMMONWEALTH MYCOLOGICAL INSTITUTE
1967

The University of the State of New York
Science Department, February 16, 1917

Dr John H. Finley
President of the University

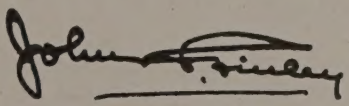
SIR:

I have the honor to communicate herewith for publication as a bulletin of the State Museum, the Annual Report of the State Botanist for the fiscal year 1916.

Very respectfully
JOHN M. CLARKE
Director

THE UNIVERSITY OF THE STATE OF NEW YORK
OFFICE OF THE PRESIDENT

Approved for publication this 20th day of February 1917



President of the University

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No. 197 ALBANY, N. Y. May 1, 1917

The University of the State of New York

New York State Museum

JOHN M. CLARKE, *Director*

REPORT OF THE STATE BOTANIST 1916

John M. Clarke
Director, Science Department

SIR:

I beg to communicate herewith my report on the work of the State Botanist's office for the fiscal year 1916.

Very respectfully
HOMER D. HOUSE
State Botanist

Scientific investigations. A rather limited amount of time was devoted to the completion of a reconnaissance of the vegetation and its ecological relations of the region about the eastern end of Oneida lake, a region of extensiye sandy barrens, swamps and bogs in addition to the broad sandy beach of the lake, the shallow waters of the lake margin and the streams flowing into the lake, the home of numerous water-loving plants. Because of soil conditions and a climate influenced to some extent by the Great Lakes, the region is characterized by a large number of plants common to the northern coastal plain. The results of this investigation appear in another part of the report.

Wild Flowers of New York. The season of 1916 was largely spent in continuation of the field work necessary for the completion of the proposed memoir on the Wild Flowers of New York State. This work was started early in August 1915 and with the appearance

of the earliest spring flowers in April 1916, the work was carried forward and completed late in September of the past year. During the two months of 1915 and the six months from April 15 to September 15, 1916, there were photographed in the field 364 species of plants which, because of their conspicuous flowers or attractive appearance might be classed under the rather indefinite term of "wild flowers."

The 364 illustrations will be in colors and grouped on about 264 plates, of which 155 plates will have each a single illustration and the 97 remaining plates will contain two illustrations each. The text will consist of a brief description of each species together with its range and such other remarks concerning its habitat as seem proper.

By means of a specially constructed apparatus as shown in the accompanying illustration (figure 1) each flower was photographed in position as it grew, without any interference from wind or excessive sunlight. For each subject there were taken one or two (usually two) dry-plate photographs and one Lumiere (autochrome) photograph. These were usually developed within a few hours so that any serious faults might be corrected by taking another exposure of the subject.

It is proper to remark here that the success of these photographs is largely due to the skill, patience and enthusiasm, often under disagreeable physical circumstances, shown by the two photographers employed: Mr Walter B. Starr of the Matthews-Northrup Company, Buffalo, and Mr Harold H. Snyder of the Zeese-Wilkinson Company, New York.

Each subject photographed was given a number in order to facilitate the designation of them in subsequent correspondence, engraving and arrangement in final order. Photographic proofs of the dry plates were marked with directions for size of completed illustration and such other alterations as seemed desirable and duplicate copies of such proofs were kept on file in the Botanist's office. From retouched photographs approved by the Botanist, the engraving companies made their plates for engraving, which were etched down with the autochrome positive as a color guide until each of the four copper plates gave the proper register of color when used upon the press in combination with one another, that is to say, blue, yellow, red and black.

Noteworthy contributions. The most important additions to the state herbarium during the past year are contributions of specimens from Prof. J. J. Davis, of Madison, Wis., the New York

Fig. 1. View of cage used to protect wild flowers from wind while photographing

Botanical Garden and Dr J. R. Weir of Missoula, Mont., in addition to the collections made by members of the staff.

Exchanges. Duplicate specimens of fungi, ferns and flowering plants have been exchanged for desirable material with the New York Botanical Garden, the National Herbarium at Washington, Prof. J. Dearness of London, Canada, Dr J. R. Weir of Missoula, Mont., and other institutions and individuals.

Additions to the herbarium. The number of specimens of New York State species which have been added to the herbarium from current collections of the staff during the past year is 528, from contributions 375, a total of 903 specimens. Of the total number of specimens received, 131 were new to the herbarium and 20 species are described as new to science.

In addition, about 900 specimens of species extralimital to New York, from the Sheldon herbarium, presented in 1914, representing characteristic species of the eastern and southern flora, have been remounted and incorporated into the herbarium. It is not the aim of the state herbarium to represent to any great extent the flora of regions beyond the State's border. The Sheldon herbarium, however, contains over 13,000 specimens, representing nearly 8000 species, most of them extralimital to New York, and it seems advisable gradually to incorporate the best of them into the herbarium for purposes of comparison with our native species and as an aid in the identification of specimens of plants collected outside the State by persons who bring or send them here for determination.

Twenty persons have contributed specimens to the herbarium; 363 species are represented by these contributions. This includes specimens sent or brought for identification which were desirable additions to the herbarium.

Collections have been made by the staff in the following counties: Albany, Bronx, Cayuga, Columbia, Genesee, Herkimer, Madison, Monroe, Nassau, Oneida, Onondaga, Ontario, Oswego, Queens, Rensselaer, Suffolk and Wayne.

Identifications. The number of identifications made of specimens sent or brought to the office by inquirers is 465. The number of persons for whom these identifications were made was 95.

Mushroom models. The Peck memorial collection of models cast in wax of edible and poisonous mushrooms now includes 56 groups, of which 8 represent poisonous species. This constitutes a most interesting exhibit and one of high educational value. It is planned to arrange these in an attractive manner in wall cases.

Many of these groups have been the subject of special study and

illustration by Doctor Peck. The following list of the groups is collated with illustrations of them which have appeared in publications of the State Museum.

1 Craterellus clavatus (*Pers.*) *Fr.*
Memoir 4, pl. 56, fig. 17–21.
49th Rep't, pl. 44, fig. 1–5 (as Craterellus cantharellus)
2 Mitrula irregularis *Peck* (M. vitellina *Sacc.* var. irregularis *Peck*)
48th Rep't, pl. 5, fig. 8–14.
3 Russula cyanoxantha (*Schaeff.*) *Fr.*
4 Lepiota naucina *Fr.* (Lepiota naucinioides *Peck*)
48th Rep't, pl. 19.
5 Agaricus arvensis *Schaeff.*
48th Rep't, pl. 8.
6 Leottia lubrica (*Scop.*) *Fr.*
7 Peziza badia *Fr.*
8 Pleurotus sapidus *Kalchbr.*
9 Tricholoma personatum *Fr.*
48th Rep't, pl. 20.
10 Clavaria pistilaris umbonata *Peck*
Memoir 4, pl. 66, fig. 15–17.
11 Russula roseipes (*Secr.*) *Bres.*
51st Rep't, pl. 53, fig. 1–7.
Memoir 4, pl. 54, fig. 1–7.
12 Russula emetica *Fr.*
13 Lycoperdon pyriforme *Schaeff.*
14 Peziza aurantia *Pers.*
15 Tremellodon gelatinosum (*Scop.*) *Pres.*
16 Clavaria cristata *Pres.*
48th Rep't, pl. 39, fig. 8–12.
17 Chanterel cibarius *Fr.*
18 Lepiota procera (*Scop.*) *S. F. Gray*
48th Rep't, pl. 18.
19 Hypholoma perplexum *Peck*
48th Rep't, pl. 47, fig. 11–18.
Memoir 4, pl. 60, fig. 10–17.
20 Armillaria mellea (*Vahl*) *Quel.*
48th Rep't, pl. 20.
21 Scleroderma geaster *Fr.*
22 Boletus cyanescens *Bull.*
23 Tricholoma sejuncta (*Sow.*) *Quel.*
24 Craterellus cantharellus (*Schw.*) *Fr.*
25 Russula albidula *Peck*
26 Pleurotus serotinus (*Schrad.*) *Fr.*
27 Fistulina hepatica *Fr.*
48th Rep't, pl. 37, fig. 8–12.
28 Geoglossum ophioglossoides (*L.*) *Sacc.*
29 Hypomyces lactifluorum (*Schw.*) *Fr.*
Mus. Bul. 105, pl. 103.

30 Hydnum albidum *Peck*
Memoir 4, pl. 67, fig. 1–6.
51st Rep't, pl. 56, fig. 1–7.
31 Hygrophorus virgineus (*Wulf.*) *Fr.*
32 Collybia dryophila
33 Chanterel floccosus *Schw.*
Memoir 4, pl. 55, fig. 9–13.
52d Rep't, pl. 60, fig. 10–14.
34 Coprinus comatus *Fr.*
48th Rep't, pl. 10.
35 Boletus alboater *Schw.* (B. nigrellus *Peck*)
36 Clavaria vermicularia *Scop.*
37 Russula virescens *Fr.*
48th Rep't, pl. 31.
38 Calvatia elata *Massee*
39 Gyromitra brevipes *Fr.* (G. esculanta very similar to this is illustrated in 48th Rep't, pl. 5, fig. 1–3.)
40 Gyromitra brunnea *Underw.*
41 Sparassis crispa (*Wulf.*) *Fr.*
42 Morchella deliciosa *Fr.*
48th Rep't, pl. 3, fig. 4–7.
43 Strobilomyces strobilaceus (*Scop.*) *Berk.*
Mus. Bul. 94, pl. 92.
44 Craterellus cornucopioides (*L.*) *Pers.*
48th Rep't, pl. 24, fig. 7–10.
45 Polyporus sulphureus *Fr.*
48th Rep't, pl. 37, fig. 1–4.
46 Polyporus caudicinus (*Scop.*) *Murr.* (P. squamosus *Huds.*)
47 Agaricus campestris (*L.*) *Fr.*
48th Rep't, pl. 6, fig. 1–10.
48 Amanita caesarea (*Scop.*) *Pers.*
48th Rep't, pl. 10.
49 Tremella lutescens *Pers.*

CONTRIBUTORS AND THEIR CONTRIBUTIONS

Lizzie C. Allen, Newtonville, Mass.

Clavaria rugosa *Sowerby*
Hygrophorus minutulus *Peck*

W. W. Ashe, Washington, D. C.

Rhododendron punctatum *Andr.*

M. S. Baxter, Rochester, N. Y.

Amelanchier stolonifera *Wiegand*
Crepis capillaris (*L.*) *Wallr.*
Eupatorium maculatum *L.*
" purpureum *L. var.* foliosum *Fern.*
Hieracium florentinum *All.*
Lilium superbum *L.*
Sagittaria cuneata *Sheldon*
Teucrium occidentale *A. Gray*
Vaccinium angustifolium *Ait.*
Veronica americana *Schw.*
Viola palmata *L.*
" perpensa *Greene*

S. H. Burnham, Hudson Falls, N. Y.

Aristida dichotoma *Michx.*
Blephilia hirsuta (*Pursh*) *Torr.*
Acalypha gracilens *A. Gray*
Cassia marylandica *L.*
Chamaesyce glyptosperma (*Englm.*) *Small*
Diaporthe parasitica *Murrill*
Galium verum *L.*
Mitella nuda *L.*
Monarda punctata *L.*
Nothoholous lanatus (*L.*) *Nash.*
Omphalia austini *Peck*
Parietaria pennsylvanica *Muhl.*
Peniophora allescheri *Bres.*
Potentilla sulphurea *Lam.*

H. L. Clapp, Boston, Mass.

Boletus subglabripes *Peck*
Cortinarius armeniacus (*Schaeff.*) *Fr.*
Gomphidius rhodoxanthus *Schw.*
Hydnum cyaneotinctum *Peck*
Hydnum repandum *L.*
Lactaria deceptiva *Peck*
Polyporus admirabilis *Peck*

Prof. J. J. Davis, Madison, Wis.

Ascochyta wisconsina *Davis*
Asterina ribicola *E. & E.*
" rubicola *E. & E.*
Cercospora crassa *Sacc.*
" corni *Davis*
" dioscoreae *E. & M.*
" echinochloae *Davis*
" fingens *Davis*
" gaultheriae *E. & E.*
" passaloroides *Wint.*
" rhoina *C. & E.*
Cylindrosporium clematidis *E. & E.*
" padi *Karst.*
" vermiforme *Davis*
Discora artocreas (*Tode*) *Fr.*
Entoloma compositarum *Farl.*
Epichloe typhina (*Pers.*) *Tul.*
Erysiphe cichoracearum *DC.*
Exoascus communis *Sadeb.*
" mirabilis *Atk.*
Graphiothecium vinosum *Davis*
Leptothyrium periclymeni (*Desm.*) *Sacc.*
Marsonina castagnei (*D. & M.*) *Magn.*
" delastrei (*Delacr.*) *Magn.*
" fraxini *E. & D.*
" neilliae (*Hark.*) *Magn.*
" rhabdospora (*E. & E.*) *Magn.*
" violae (*Pass.*) *Magn.*
Melampsora arctica *Rostr.*
Microsphaera euphorbiae (*Peck*) *B. & C.*
Ovularia asperifolii *Sacc.*
Peronospora lophanthi *Farl.*
Phleospora celtidis *E. & M.*
Puccinia erikssonii *Bubak.*
" peckii (*DeToni*) *Howe*
" pustulata (*Curt.*) *Arth.*
Phyllosticta medicaginis (*Fckl.*) *Sacc.*
Plasmopara humili *Miyabe & Takahashi*
" ribicola *Schroet.*
" caricis *E. & E.*
Ramularia ionophila *Davis*
" nemopanthis *Peck*
" punctiformis (*Schl.*) *var. Hoehn.*
" rufomaculans *Peck*
" sambucina *Sacc.*
" uredinis (*Voss*) *Sacc.*
" variegata *Ell. & Holw.*
Septocylindrum aromaticum *Sacc.*
Septoria campanulae (*Lev.*) *Sacc.*
" cannabis (*Lasen*) *Sacc.*
" epilobii *E. & E.*
" lactucicola *E. & M.*
" musiva *Peck*
" pachyspora *Ell. & Holw.*
" rudbeckiae *Ell. & Hals.*
" saccharina *E. & E.*
" sigmoidea *E. & E.*
Tuberculina parsicina (*Ditm.*) *Sacc.*

Prof. John Dearness, London, Ont.

Alternaria solani (*E. & M.*) *Jones & Grout*
Cryptospora femoralis *Peck*
Diaporthe columbiensis *E. & E.*
Diatrype macounii *E. & E.*
Lepiota panaeola (*Fr.*) *P. Karst.*
Melanconium sphaeroideum *Link*
Phragmidium rosae-californiae *Diet.*
Phragmidium disciflorum (*Tode*) *James*
Polyporus fulvidus *E. & E.*
Puccinia antirrhinae *Diet. & Holw.*
" symphoricarpi *Hark.*
Sebacina incrustans *Tul.*
Septoria stachydis *Rob. & Desm.*
Stemphylium magnusianum *Sacc.*

Prof. J. H. Faull, Toronto, Ont.

Polyporus albellus *Peck*
" anceps *Peck*
Polyporus balsameus *Peck*
" chioneus *Fr.*

Mrs E. P. Gardner, Canandaigua, N. Y.

Camptosorus rhizophyllus (*L.*) *Link*
Centaura nigra *L.*
Gentiana quinquefolia *L.*
Serapias helleborine *L.*

J. M. Grant, Sequin, Wash.

Agaricus campestre *L.*
Armillaria mellea (*Vahl*) *Quel.*
Coprinus comatus *Fr.*
Cortinellus multiformis (*Schaeff.*) *Murr.*
Hypholoma fasciculare (*Huds.*) *Fr.*
Laccaria laccata (*Scop.*) *Berk.*
Lepiota granulosa (*Batsch*) *Fr.*
Lycoperdon pyriforme *Batsch*
Panaeolus papilionaceus *Fr.*
Pholiota minima *Peck*

Roy Latham, Orient, N. Y.

Cephalozia francisci *Hook.*
Coleosporium helianthi (*Schw.*) *Arth.*
Cucurbitaria elongata *Fr.*
Cylindrosporium iridis *E. & H.*
Eutypella densta *E. & E.*
Hendersonia robiniae *West.*
Hysterium pulicare *Pers.*
Hysteriographium cookeana (*Ger.*) *Sacc.*
" lesquereuxii (*Duby*)
Leptostromella litigiosum (*Desm.*) *Sacc.*
Nigredo polemonii (*Peck*) *Arth.*
" polygoni (*Pers.*) *Arth.*
Phoma sepincola (*Kichx.*) *Sacc.*
Phragmidium rosae-setigerae *Diet.*
Phyllachora cyperi *Rehm.*
Puccinia cicutae *Lasch.*
" fraxinata (*Link*) *Arth.*
" cyperi *Arth.*
" proserpinacae *Farl.*
Rhytisma decolorans *Fr.*
" ilicis-canadensis *Schw.*
Septoria oenotherae *West*
Taphrina quercus (*Cke.*) *Sacc.*
Valsa liquidambaris *Schw.*

New York Botanical Garden, New York

Acer pennsylvanicum *L.*
Alnus rugosa (*DuRoi*) *K. Koch*
Antennaria plantaginifolia (*L.*) *Rich.*
Aralia nudicaulis *L.*
Asclepias incarnata *L.*
Aureolaria villosa (*Muhl.*) *Raf.*
Betula alleghanensis *Britt.*
" coerulea *Blanchard*
Capnoides sempervirens (*L.*) *Borck.*
Chamaedaphne calyculata (*L.*) *Moench.*
Chionanthus virginica *L.*
Coreopsis lanceolata *L.*

Cyperus rivularis *Kunth.*
" strigosus *L.*
Dasystoma pedicularis (*L.*) *Benth.*
Dennstaedtia puncticuloba (*Michx.*) *Moore*
Dryopteris cristata (*L.*) *A. Gray*
" marginalis (*L.*) *A. Gray*
Eriocaulon decangulare *L.*
Grossularia cynosbati (*L.*) *Mill.*
" hirtella (*Michx.*) *Spach.*
Hudsonia montana *Nutt.*
Juncus georgianus *Coville*
Juniperus communis *L.*
Kalmia latifolia *L.*
Lepidium campestre (*L.*) *R. Br.*
Lupinus perennis *L.*
Lycopodium annotinum *L.*
" lucidulum *Michx.*
Meibomia dillenii (*Darl.*) *Kuntze*
Monarda mollis *L.*
Myriophyllum humile (*Raf.*) *Morong.*
Osmunda regalis *L.*
Panax trifolium *L.*
Polycodium stamineum (*L.*) *Greene*
Proserpinaca palustris *L.*
Prunus maritima *Wang.*
Quercus muhlenbergii *Engelm.*
Ranunculus abortivus *L.*
Rhamnus cathartica *L.*
Sabbatia campanulata (*L.*) *Torr.*
" dodecandra (*L.*) *B. S. P.*
Sedum roseum (*L.*) *Scop.*
Senecio obovatus *Muhl.*
Spiraea tomentosa *L.*
Steironema lanceolatum (*Walt.*) *A. Gray*
Syndesmon thalictroides (*L.*) *Hoffmg.*
Taxus canadensis *Marsh.*
Thalictrum dioicum *L.*
Tithymalus cyparissias (*L.*) *Hill*
Viburnum canbyi *Britton*
" semitomentosum (*Michx.*) *Rehder*
Viola pubescens *Ait.*

Joseph Rubinger, New York, N. Y.

Antennaria canadense *Greene*
" plantaginifolia (*L.*) *Rich.*
Aquilegia canadensis *L.*
Cardamine bulbosa (*Schreb.*) *B. S. P.*
Carex torta *Boott.*
Tithymalus cyparissias (*L.*) *Hill*
Floerkea proserpinacoides *Willd.*
Houstonia caerulea *L.*
Lycopodium clavatum *L.*
Polygala pauciflora *Willd.*
Azalea nudiflora *L.*
Ribes americanum *L'Her.*
Viola septentrionalis *Greene*
Zizia aurea (*L.*) *Koch.*

Prof. C. M. Scherer, Kent, Ohio

Gymnosporangium blasdaleanum (*D. & H.*) *Kern.*

F. A. Ward, Cortland, N. Y.

Botrychium lanceolatum (*S. G. Gmel.*) *Angs.*
" neglectum *Wood*
Carex asa-grayii *Bailey*
Mitella nuda *L.*
Potentilla canadensis *L.*
Selaginella apus (*L.*) *Spring*

Dr J. R. Weir, Missoula, Mont.

Aecidium allenii *Clinton*
Aleuria aurantia (*Pers.*) *Fckl.*
Aurantiporellus alboluteus (*E. & E.*) *Murr.*
Calyptospora columnaris (*A. & S.*) *Kuhn*
Cerrena unicolor (*Bull.*) *Murr.*
Coleosporium solidaginis (*Schw.*) *Thüm.*
Coltricia perennis (*L.*) *Murr.*
" tomentosa (*Fr.*) *Murr.*
Coniophora byssoides *Pers.*
Coriolus nigromarginatus (*Schw.*) *Murr.*

Coriolus prolificans (*Fr.*) *Murr.*
" versicolor (*L.*) *Quel.*
Coriolellus sequoiae (*Cope.*) *Murr.*
Creonectria purpurea (*L.*) *Seaver*
Cronartium comandrae *Peck*
" comptoniae *Arth.*
Dimerasporium collinsii (*Schw.*) *Thüm.*
Earlea speciosa (*Fr.*) *Arth.*
Echinodontium tinctorium *E. & E.*
Endothia gyrosa (*Schw.*) *Fckl.*
Fomes annosus (*Fr.*) *Cooke*
" ellisianus *F. W. Anders.*
" laricis (*Jacq.*) *Murr.*
" roseus (*A. & S.*) *Cooke*
" ungulatus (*Schaeff.*) *Sacc.*
Funalia stuppea (*Berk.*) *Murr.*
Gloeophyllum hirsutum (*Schaeff.*) *Murr.*
Grandinia granulosa *Fr.*
Gymnosporangium juvenescens *Kern.*
Hymenochaete curtisii *Berk.*
" tabaceum (*Sow.*) *Lev.*
Hypodermella laricis *Tub.*
Hypoxylon fuscum (*Pers.*) *Fr.*
" multiforme *Fr.*
Keithia thujina *Durand*
Laetiporus speciosus (*Batt.*) *Murr.*
Lophodermum nervisequum (*DC.*) *Rehm*
" pinastri *Schrad.*
Melampsora albertensis *Arth.*
" medusae *Thüm.*
Melampsorella elatina (*A. & S.*) *Arth.*
Melampsoropsis pyrolae (*DC.*) *Arth.*
Melampsoridium betulae (*Schum.*) *Diet.*
Neopeckia coulteri (*Peck*) *Sacc.*
Nyssopsora clavellosa (*Berk.*) *Arth.*
Ophiobolus acuminatus (*Schw.*) *Duby*
Peniophora carnosa *Burt*
" crassa *Burt*
" gigantea *Fr.*
" glebulosa *Bres.*
" glabrifera *E. & E.*
" velutina (*DC.*) *Cooke.*
Peridermium filamentosum *Peck*
Phacidium infestans *Karst.*
Piptoporus suberosus (*L.*) *Murr.*
Poria callosa *Fr.*
" carbonacea *B. & C.*
" corticola *Fr.*
" punctata *Fr.*
" undata (*Pers.*)
" vulgaris *Fr.*
Porodaedalea pini (*Thore*) *Murr.*
Puccinia acuminata *Peck*
" asteris *Duby*
" circaeae *Pers.*
" circii-lanceolati *Schw.*
" crandallii *Pam. & Hume*
" grossulariae (*Schum.*) *Lagerh.*
" koeleriae *Arth.*
" majanthae (*Schum.*) *Arth.*
" menthae *Pers.*
" obscura *Schroet.*
" peckii (*DeToni*) *Kellerm.*
" rhamni (*Pers.*) *Wettst.*
" stipae *Arth.*
" symphoricarpi *Hark.*
Pucciniastrum myrtillii (*Schum.*) *Arth.*
" pustulatum (*Pers.*) *Diet.*
Pycnoporus cinnabarinus (*Jacq.*) *Karst.*
Pyropolyporus igniarius (*L.*) *Murr.*
Rhizina inflata (*Schaeff.*) *Sacc.*
Rhytisma punctata (*Pers.*) *Fr.*
" salicina (*Pers.*) *Fr.*
Spongipellis borealis (*Fr.*) *Pat.*
Stereum chailletii *Fr.*
" purpureum *Pers.*
" sulcatum *Burt.*
Thelephora caryophyllea *Schaeff.*
" fimbriata *Schw.*
Trametes hexagoniformis *Murr.*
" setosus *Weir*
" suaveolens (*L.*) *Fr.*
Taphrina aurea (*Pers.*) *Fr.*
Tyromyces anceps (*Peck*) *Murr.*
Uromyces holwayi *Lagerh.*
Uropyxis sanguinea (*Peck*) *Arth.*
Wallrothiella arceuthobii (*Peck*) *Sacc.*

Douglas M. White, Rochester, N. Y.

Cynanchium vincetoxicum (*L.*) *Pers.*
Equisetum sylvaticum *L.*

Miss M. K. Smith, Jamaica, N. Y.

Agoseris glauca (*Nutt.*) *Greene*
Alsine longipes (*Goldie*) *Coville*
Aquilegia flavescens *S. Wats.*
Arnica cordifolia *Hooker*
Atragene columbiana *Nutt.*
Calochortus apiculatus *Baker*
Campanula rotundifolia *L.*
Chimaphila corymbosa *Pursh*
Dasiphora fruticosa (*L.*) *Rydb.*
Delphenium bicolor *Nutt.*
Erigeron speciosus *DC.*
" uniflorus *L.*
Geranium richardsonii *F. & T.*
Galium boreale *L.*
Homalobus tenellus (*Pursh*) *Britton*
Lupinus ornatus *Pursh*
Moneses uniflora (*L.*) *A. Gray*
Parnassia fimbriata *Konig.*
Peramium decipiens (*Hook.*) *Piper*
Pyrola bracteata *Hooker*
Ramischia secunda (*L.*) *Rydb.*
Senecio triangularis *Hooker*
Schizonotus discolor (*Pursh*) *Raf.*
Sphaeralcea rivularis (*Dougl.*) *Torr.*
Spiraea lucida *Dougl.*
Thlaspi arvense *L.*
Tiarella unifoliata *Hooker*
Veronica americana *Schw.*
Viola canadensis *L.*
" orbiculata *Geyer*
Xerophyllum tenax (*Pursh*) *Nutt.*
Zygadenus elegans *Pursh*

SPECIMENS ADDED TO THE HERBARIUM

New to the herbarium

Aposphaeria allantella *Sacc. & Roum.*
" striolata *Sacc.*
Ascochyta pirina *Peglion*
Cephalozia fransisci *Hook.*
Cercospora corni *Davis*
" lathyri *D. & H.*
" microstigma *Sacc.*
Colletotrichum sordidum *Davis*
Coriolellus sequoiae (*Copeland*) *Murr.*
Coryne sarcoides (*Jacq.*) *Tul.*
Coryneum pithoideum *D. & H.*
Cryptospora leiphaemioides *D. & H.*
Cryptosporium robiniae *D. & H.*
Curreya peckiana *Sacc.*
Cylindrosporium iridis *E. & H.*
Cytospora minuta *Thüm.*
" phomopsis *Sacc.*
" suffusa (*Fr.*) *Tul.*
Dendrodochium acerinum *D. & H.*
Dendrophoma phyllogena *Sacc.*
Diaporthe americana *Speg.*
" columbiensis *E. & E.*
" epimicta *E. & E.*
Diaporthe ocularia (*C. & E.*) *Sacc.*
" oncostoma (*Duby*) *Fckl.*
" paulula (*C. & E.*) *Sacc.*
" phomaspora (*C. & E.*) *Sacc.*
" sassafras *D. & H.*
Diatrype macounii *E. & E.*
Diatrypella subfulva (*B. & C.*) *Sacc.*
Diplodia benzoina *Sacc.*
" convolvuli *D. & H.*
" subcuticularis *D. & H.*
" thalictri *E. & D.*
Dothiorella peckiana *Sacc.*
Eutypella densta *E. & E.*
" gleditschiae *Berl.*
" staphyleae *D. & H.*
Fomitiporia pereffusa *Murr.*
Gibbera vaccinii (*Sow.*) *Fr.*
Gymnosporangium blasdaleanum (*D. & H.*) *Kern.*
Haplosporella malorum *Sacc.*
" velata *E. & B.*
Hendersonia anceps *Sacc.*
Hypochnus rubiginosus *Bres.*
" spongiosus (*Schw.*) *Burt*
Hypoderma tenellum *Sacc.*
Hysterographum lesquereuxii (*Duby*) *Sacc.*
Lepiota panaeola (*Fr.*) *P. Karst.*
Leptosphaeria consessa (*C. & E.*) *Sacc.*
" houseana *Sacc.*
" hydrophila *Sacc.*
" myricae *D. & H.*
Leptothryium dearnessii *Kabat & Bubak*

Massarinula brassicae *D. & H.*
Melanconium sphaeroideum *Link*
Meliola pitya *Sacc.*
Metasphaeria anthelmintica (*Cke.*) *Dearn.*
Microascus americanus *Sacc.*
Microdiplodia laurina *D. & H.*
Micropeltis pitya *Sacc.*
Mycena grantii *Murrill*
Myxosporium rhois (*B. & C.*) *Sacc.*
Oospora candidula *var.* carpogena *Sacc.*
Patellaria patinelloides (*S. & R.*) *Sacc.*
Peniophora allescheri *Bres.*
Phaeangium peckianum *Sacc.*
Phacidium andromedae *D. & H.*
Phialea pulchella (*Fckl.*) *Sacc.*
Phoma atomica *Sacc.*
" houseana *Sacc.*
" ochra *Cooke*
" oleracea *var.* meliloti *Sacc.*
" pleosporoides *Sacc.*
" vaccinii *D. & H.*
Phomopsis daturae *Sacc.*
" diachenii *Sacc.*
" viticola *Sacc.*
Phragmidium andersoni *Shear*
Phlyctanea verrucioides *Sacc.*
Phyllosticta crataegi (*Cooke*) *Sacc.*
" opaca *E. & E.*
" pirina *Sacc.*
Poria weirii *Murrill*
Propolidium atrovirens (*Fr.*) *Rehm.*
Puccinia angelicae (*Schum.*) *Lagerh.*
Puccinia antirrhinae *D. & H.*
" ceanothi (*E. & K.*) *Arth.*
" nodosa *E. & H.*
" ornata *Arth. & Holw.*
" proserpinacea *Farlow*
Rhabdospora clarkeana *Sacc.*
Sclerotium fallax *Sacc.*
" mendax *Sacc.*
Septoria breviuscula *Sacc.*
" gentiana *D. & H.*
" krigiae *D. & H.*
" macrosporia *Dearn.*
" rudbeckiae *var.* oaklandiae *Sacc.*
Sphaerella altera *Pass.*
" populifolia *Cooke*
" populnea *Sacc.*
" vaccinii *var.* corymbosi *Sacc.*
Sphaerographum hystricinum *var.* viburni *D. & H.*
Sphaeropsis aristolochiae *D. & H.*
" liquidambaris *D. & H.*
" punctata *D. & H.*
Sporodesmium opacum *Sacc.*
" pilulare *Sacc.*
Stemphylium magnusianum *Sacc.*
Stereum sulcatum *Burt*
Urophlyctis pluriannulatum (*B. & C.*) *Farlow*
Valsa americana *B. & C.*
" auerswaldi *Nke.*
" etherialis *E. & E.*
" nyssae *Grev.*

Amelanchier humilis *Wiegand*
" stolonifera *Wiegand*
Betula caerulea *Blanchard*
Elymus halophilus *Bicknell*
Heuchera curtisii *T. & G.*
Juncus georgianus *Coville*
Lycopus europaeus *L.*
" membranaceus *Bicknell*
Panicum pseudopubescens *Nash*
Potentilla sulphurea *Lam.*
Sagittaria cuneata *Sheldon*
Scabiosa arvensis *L.*
Solidago shortii *T. & G.*
Viburnum canbyi *Britton*
" semitomentosum (*Michx.*) *Rehder*

Not new to the herbarium

(Fungi)

Alternaria solani (*E. & M.*) *Jones & Grout*
Asteroma ribicolum *E. & E.*
Bjerkandera adusta (*Willd.*) *Karst.*

Bremia lactucae *Regel.*
Camarosporium robiniae (*West.*) *Sacc.*
Cenangium furfuraceum (*Roth.*) *De Not.*
Cercospora acetosella *Ell.*
" fingens *Davis*
" gaultheriae *E. & E.*
" omphacodes *Ell. & Holw.*
" pastinacea (*Sacc.*) *Peck*
Ceriomyces subglabripes (*Pk.*) *Murr.*
Chlorosplenium chlora (*Schw.*) *Massee*
Cintractia junci (*Schw.*) *Trel.*
Clavaria rugosa *Sowerby*
Clitocybe multiceps *Pk.*
Clitopilus abortivus *B. & C.*
Coleosporium helianthi (*Schw.*) *Arth.*
" solidaginis (*Schw.*) *Thüm.*
Coltricia perennis (*L.*) *Murr.*
" tomentosa (*Fr.*) *Murr.*
Coriolus nigromarginatus (*Schw.*) *Murr.*
" versicolor (*L.*) *Quel.*
Corticium incarnatum (*Pers.*) *Fr.*
" pezizoideum (*Schw.*) *von Schrenk*
Cortinarius armeniacus (*Schaeff.*) *Fr.*
Coryne sarcoides (*Jacq.*) *Tul.*
Crepidopus ostreatus (*Jacq.*) *S. F. Gray*
" serotinus (*Schrad.*) *Murr.*
Cronartium comandrae *Peck*
" comptoniae *Arth.*
Cryptospora aculeans (*Schw.*) *E. & E.*
" femoralis (*Peck*) *Sacc.*
Cucurbitaria elongata (*Fr.*)
Daedalea quercina (*L.*) *Pers.*
Diaporthe bicincta (*C. & P.*) *Sacc.*
" carpini (*Pers.*) *Fckl.*
Diaporthe comptoniae *Schw.*
" farinosa *Peck*
" neilliae *Peck*
" obscura (*Peck*) *Sacc.*
" oxyspora (*Pk.*) *Sacc.*
" parasitica *Murrill*
" woolworthii *Peck*
Diplodia melaena *Lev.*
" rubi *Fr.*
Discosia maculicola *Gerard*
Dothiorella quercina (*C. & E.*) *Sacc.*
Eutypella glandulosa (*Cke.*) *E. & E.*
" stellulata (*Fr.*) *Sacc.*
Fenestrella princeps *Tul.*
Geopetalum abietinum (*Schrad.*) *Murr.*
Gloeosporium salicis *West.*
" septorioides *Sacc.*
Gloniopsis cookeana (*Ger.*) *Sacc.*
Grandinia granulosa *Fr.*
Gymnosporangium juvenescens *Kern.*
Gyromitra esculenta *Fr.*
Helotium citrinum (*Batsch*) *Fr.*
Helvella gracilis *Pk.*
" infula *Schaeff.*
Hydnum cyaneotinctum *Peck*
Hygrophorus cantharellus *Schw.*
" miniatus *Fr.*
" minutulus *Peck*
Hymenochaete cinnamomea (*Pers.*) *Fr.*
Hypocrea sulphurea (*Schw.*) *Sacc.*
Hypoderma smilacis (*Schw.*) *Rehm.*
Hypoxylon morsei *B. & C.*
Hysterographium smilacis *Schw.*
Kuehneola potentillae (*Schw.*) *Arth.*
Laccaria laccata (*Scop.*)
Lactaria deceptiva *Peck*
Lentinus spretus *Pk.*
Leptosphaeria subconica (*C. & P.*) *Sacc.*
Leptostromella filicina (*B. & C.*) *Sacc.*
Leptothyrium vulgare (*Fr.*) *Sacc.*
Lophodermium pinastri *Schrad.*
Massaria vomitoria *B. & C.*
Melampsorella elatina (*A. & S.*) *Arth.*
Melampsoropsis pyrolae (*DC.*) *Arth.*
Melanconium oblongum *Berk.*
Microsphaera diffusa *C. & P.*
Mollisia cinerea (*Batsch*) *Karst.*
Neopeckia coulteri (*Pk.*) *Sacc.*
Nigredo caladi (*Schw.*) *Arth.*
" perigynius (*Halsted*) *Arth.*
" polemonii (*Peck*) *Arth.*
" polygoni (*Pers.*) *Arth.*
" prominens (*DC.*) *Arth.*
Odontia fimbriata (*Pers.*) *Fr.*
Omphalia austini *Peck*
Ophiobolus porphyrogonis (*Tode*) *Sacc.*
Peridermium filamentosum *Peck*
Peronospora parasitica (*Pers.*) *De Bary*
Phialea pulchella (*Fckl.*) *Sacc.*
Phoma pallens *B. & C.*
" sepincola (*Kickx.*) *Sacc.*
Phomopsis daturae (*R. & F.*) *Sacc.*
Phragmidium disciflorum (*Tode*) *James*
" rosae-californicae *Diet.*
" rosae-setigerae *Diet.*

Phyllachora cyperi *Rehm.*
Phyllosticta cornicola (*DC.*) *R.*
" latifolia *E. & E.*
" smilacis *E. & M.*
Plasmopara caricis *E. & E.*
" humuli *M. & T.*
" ribicola *Schroet.*
Pleospora herbarum (*Pers.*) *Rabh.*
Polyporus admirabilis *Pk.*
" fulvidus *E. & E.*
" polyporus (*Retz.*) *Murrill*
Polythelis fusca (*Pers.*) *Arth.*
" thalictri (*Chev.*) *Arth.*
Porodaedalea pini (*Thore*) *Murr.*
Puccinia andropogonis *Schw.*
" angustata *Peck*
" artemisiarum *Duby*
" asparagi *DC.*
" caricis (*Schum.*) *Reb.*
" cicutae *Lasch.*
" claytoniata (*Schw.*) *Peck*
" crandallii *Pam. & Hume*
" ellisiana *Thüm.*
" helianthi *Schw.*
" eriophori *Thüm.*
" extensicola *Plowr.*
" fraxinata (*Link*) *Arth.*
" grossulariae (*Schum.*) *Lagerh.*
" orbicula *P. & C.*
" peckii (*De Toni*) *Kellerm.*
" proserpinaceae *Farlow*
" pustulata (*Curt.*) *Arth.*
" rhamni (*Pers.*) *Wettsb.*
" symphoricarpi *Harkness*
" urticae *Lagerh.*
" violae (*Schum.*) *DC.*
Pucciniastrum pustulatum (*Pers.*) *Diet.*
Pycnoporus cinnabarinus (*Jacq.*) *P. Karst.*
Pyrenopeziza rubi (*Fr.*) *Rehm.*
Rumularia brunellae *E. & E.*
" celastri *Peck*
" plantaginis *E. & M.*
" ranunculi *Peck*
" variabilis *Fckl. var.* digitalidis *Sacc.*
Rhytisma decolorans *Fr.*
" ilicis-canadensis *Schw.*
Sebacina incrustans *Tul.*
Schizonella melanogramma (*DC*) *Schroet.*
Scoleconectria scolecospora (*Bref.*) *Seaver*
Septoria brunellae *E. & H.*
" dentariae *Peck*
" diervillae *E. & E.*
" erigerontis *Peck*
" oenotherae *West.*
" pileae *Thüm.*
" polygalae *Peck*
" saccharina *E. & E.*
" sedicola *Peck*
" sicyi *Peck*
" viride-tingens *Crut.*
Sphaerella arbutifoliae *Peck*
" pontederiae *Peck*
Sphaeropsis biformis *Peck*
" linearis *Peck*
" mali (*West.*) *Sacc.*
" platani *Peck*
" punctata *D. & H.*
" tiliacea *Peck*
Spongipellis borealis (*Fr.*) *Pat.*
Stamnaria equiseti (*Hoffm.*) *Sacc.*
Stemphylium magnusianum *Sacc.*
Taphrina aurea (*Pers.*) *Fr.*
" quercus (*Cooke*) *Sacc.*
Trametes cervinus *Pers.*
Tranzschelia punctata (*Pers.*) *Arth.*
Uredinopsis mirabilis (*Peck*) *Magn.*
Urocystis anemones (*Pers.*) *Schroet.*
Uropyxis sanguinae (*Pk.*) *Arth.*
Valsa ambiens (*Pers.*) *Fr.*
" americana *B. & C.*
" caryigena *B. & C.*
" ceratophora *Tul.*
" liquidambaris (*Schw.*) *Cooke*
" salicina (*Pers.*) *Fr.*
Valsaria exasperans (*Gerard*) *var.* aceris *Rehm.*
Valsonectria parasitica (*Murr.*) *Rehm*
Vermicularia violaerotundifoliae (*Sacc.*) *House*
Wallrothiella arceuthobii (*Pk.*) *Sacc.*

Not new to the herbarium

(Flowering plants and ferns)

Acalypha gracilens *A. Gray*
Acer tomentosum *Desv.*
Acerates viridiflora *Ell.*
Acnida cannabina *Linn.*
Actaea alba (*L.*) *Mill.*
Agrimonia gryposepala *Wallr.*
" striata *Mx.*
Ailanthus glandulosa *Desf.*
Aletris farinosa *Linn.*
Allium canadense *Linn.*
Amelanchier canadensis (*L.*) *Medic.*
" intermedia *Spach.*
" spicata (*Lam.*) *C. Kock*
Anchistea virginica (*L.*) *Presl.*
Andromeda canescens *Small*
Anemone quinquefolia *Linn.*
Antennaria ambigens *Fernald*
" canadensis *Greene*
" fallax *Greene*
" grandis (*Fern.*) *House*
" neodioica *Greene*
" occidentalis *Greene*
" parlinii *Fernald*
" petaloidea *Fernald*
" plantiginifolia (*L.*) *Rich*
Anticlea elegans (*Pursh*) *Rydb.*
Apocynum androsaemifolium *L.*
Aquilegia canadensis *Linn.*
" vulgaris *Linn.*
Arabis glabra (*L.*) *Bernh.*
" lyrata *Linn.*
Arethusa bulbosa *Linn.*
Argentina anserina (*L.*) *Rydb.*
Aristida dichotoma *Michx.*
Aronia arbutifolia (*L.*) *Ell.*
" melanocarpa (*Mx.*) *Britt.*
Asarum canadense *Linn.*
Asclepias incarnata *Linn.*
" pulchra *Ehrh.*
" quadrifolia *Jacq.*
Aster ericoides *L.*
" laevis *L.*
" macrophyllus *L.*
" multiformis *Burgess.*
" novae-angliae *L.*
" prenanthoides *Muhl.*
" ptarmicoides (*Nees*) *T. & G.*
Aster tenuifolius *L.*
Azalea nudiflora *Linn.*
" viscosa *Linn.*
Bartonia virginica (*L.*) *B. S. P.*
Bicuculla canadensis (*Goldie*) *Millsp.*
" cucullaria (*L.*) *Millsp.*
Bidens cernua *L.*
" trichosperma (*Mx.*) *Britt.*
Blephariglottis blephariglottis (*L.*) *Rydb.*
" lacera (*Michx.*) *Farwell*
" psycodes (*L.*) *Rydb.*
Bromus tectorum *L.*
Blephilia hirsuta (*Pursh*) *Torr.*
Botrychium lanceolatum (*S. G. Gmel.*) *Angs.*
" neglectum *Wood*
Cakile edentula (*Bigel.*) *Hook.*
Calla palustris *Linn.*
Caltha palustrus *Linn.*
Camelina microcarpa *Andrz.*
Campanula aparinoides *Pursh*
" rapunculoides *Linn.*
" rotundifolia *Linn.*
Cardamine bulbosa (*Schreb.*) *B. S. P.*
" pratensis *Linn.*
Carex albicans *Willd.*
" aquatilis *Wahl.*
" arctata *Boott.*
" asa-grayi *Bailey*
" bromoides *Schk.*
" buxbaumii *Wahl.*
" canascens *L. var.* disjuncta *Fernald*
" cephaloidea *Dewey*
" communis *Bailey*
" crawfordii *Fernald*
" cristata *Schw.*
" deflexa *Hornem.*
" diandra *Schk.*
" festucacea *Schk.*
" folliculata *Linn.*
" gracillima *Schw.*
" granularis *Muhl.*
" grisea *Wahl.*
" hystricina *Muhl.*
" lacustris *Willd.*

Carex lanuginosa *Michx.*
" lasiocarpa *Schk.*
" laxiflora *Lam.*
" limosa *L.*
" magellanica *Lam.*
" muhlenbergii *Wahl.*
" oligosperma *Michx.*
" pallescens *L.*
" pedunculata *Muhl.*
" prasina *Wahl.*
" projecta *Mackenzie*
" retrorsa *Schw.*
" rosea *Schk.*
" rostrata *Stokes*
" scabrata *Schw.*
" scirpoides *Schk.*
" scoparia *Schk.*
" scoparia *var.* condensa *Fernald*
" sprengelii *Dewey*
" stellulata *Good.*
" stellulata *var.* cephalantha (*Bailey*) *Fernald*
" stricta *Lam.*
" torta *Boott*
" trichocarpa *Muhl.*
" typhinoides *Schw.*
" varia *Muhl.*
" vestita *Willd.*
" virescens *Muhl.*
" vulpinoidea *Michx.*
Cassia marylandica *Linn.*
Castalia tuberosa (*Paine*) *Greene*
Cathartolinum medium (*Planch.*) *Small*
" striatum (*Walt.*) *Small*
Chamaecyparis thyoides (*L.*) *B. S. P.*
Chamaesyce glyptosperma (*Engelm.*) *Small*
Chenopodium rubrum *Linn.*
Chimaphila maculata (*L.*) *Pursh*
Chiogenes hispidula (*L.*) *Torr. & Gray*
Chrysopsis falcata (*Pursh.*) *Ell.*
Cimicifuga racemosa (*L.*) *Nutt.*
Cirsium muticum *Michx.*
Claytonia caroliniana *Michx.*
Clethra acuminata *Michx.*
" alnifolia *Linn.*
Clinopodium vulgare *Linn.*
Clintonia borealis (*Ait.*) *Raf.*
" umbellulata (*Michx.*) *Torr.*
Comarum palustre *Linn.*
Commelina communis *Linn.*
Comptonia peregrina (*L.*) *Coulter*
Convolvulus repens *Linn.*
" spithamaeus *Linn.*
Coreopsis lanceolata *Linn.*
" major *Walt.*
" rosea *Nutt.*
" verticillata *Linn.*
Cornus canadensis *Linn.*
Coronilla varia *Linn.*
Crepis capillaris (*L.*) *Wallr.*
Crocanthemum majus (*L.*) *Britt.*
Cynanchum vincetoxicum (*L.*) *Pers.*
Cynoglossum officinale *Linn.*
Cyperus filicinus *Vahl*
" inflexus *Muhl.*
Cypripedium candidum *Willd.*
" parviflorum *Salisb.*
" pubescens *Pursh*
" reginae *Walt.*
Dalibarda repens *L.*
Dasystephana andrewsii (*Griseb.*) *Small*
Dasystoma flava (*L.*) *Wood*
Dentaria diphylla *Michx.*
" laciniata *Muhl.*
" maxima *Nutt.*
Deschampsia flexuosa (*L.*) *Trin.*
Dianthera americana *Linn.*
Dracocephalum virginicum *Linn.*
Drosera intermedia *Hayne*
" longifolia *L.*
" rotundifolia *Linn.*
Drymocallis agrimonoides (*Pursh*) *Rydb.*
Dryopteris dryopteris (*L.*) *Britt.*
" goldiana (*Hook.*) *Gray*
" simulata *Davenp.*
" spinulosa (*O. F. Müller*) *Kze.*
Echinochloa frumetacea (*Roxb.*) *Link*
" muricata (*Michx.*) *Fernald*
Elymus virginicus *Linn.*
Epilobium adenocaulon *Haussk.*
Equisetum sylvaticum *L.*
Erigeron philadelphicus *Linn.*
Eriophorum angustifolium *Roth.*
" gracile *Koch.*
" tenellum *Nutt.*
" virginicum *Linn.*
" viridicarinatum (*Engelm.*) *Fern.*

Erythronium americanum *Ker.*
Eubotrys racemosa (*L.*) *Nutt.*
Eupatorium hyssopifolium *L.*
" maculatum *Linn.*
" purpureum *L. var.* foliosum *Fern.*
Filipendula rubra (*Hill*) *Robinson*
Fissipes acaulis (*L.*) *Small*
Floerkea proserpinacoides *Willd.*
Fragaria virginiana *Duchesne*
Galeorchis spectabilis (*L.*) *Rydb.*
Galinsoga parviflora *Cav.*
Galium boreale *Linn.*
" verum *Linn.*
Gaylussacia baccata *Wang.*
" dumosa (*Andr.*) *T. & G.*
" frondosa (*L.*) *T. & G.*
Geum rivale *Linn.*
" virginianum *Linn.*
Glecoma hederacea *Linn.*
Glycine apios *Linn.*
Gratiola aurea *Muhl.*
Gymnadeniopsis clavellata (*Mx.*) *Rydb.*
Helenium autumnale *L.*
" latifolium *Pursh*
Helianthus decapetalus *L.*
" giganteus *Linn.*
" mollis *Lam.*
Heliopsis helianthoides (*L.*) *Sweet*
Hemerocallis fulva *Linn.*
Hepatica acutiloba *DC.*
" hepatica (*L.*) *Karst.*
Hieracium florentinum *All.*
" pilosella *Linn.*
Hordeum jubatum *Linn.*
Houstonia caerulea *Linn.*
" longifolia *Gaertn.*
Hudsonia tomentosa *Nutt.*
Hydrophyllum virginianum *Linn.*
Hypericum adpressum *Bart.*
" ascyron *Linn.*
" canadense *Linn.*
" punctatum *Lam.*
Hypopitys hypopitys (*L.*) *Small*
Hypoxis hirsuta (*L.*) *Coville*
Hystrix hystrix (*L.*) *Millsp.*
Ibidium plantagineum (*Raf.*) *House*
" praecox (*Walt.*) *House*
" romanzoffianum (*Cham.*) *House*
Ilysanthes attenuata (*Muhl.*) *Small*
Ionoxalis violacea (*L.*) *Small*
Isnardia palustris *L.*
Juncus gerardi *Loisel.*
Junipersus horizontalis *Moench.*
Kalmia angustifolia *Linn.*
" latifolia *Linn.*
Kneiffia alleni (*Britt.*) *Small*
" linearis (*Michx.*) *Spach*
" pumila (*L.*) *Spach*
" riparia (*Nutt.*) *Small*
Koellia virginianum (*L.*) *MacM.*
Lactuca canadensis *Linn.*
Lathyrus maritimus (*L.*) *Bigel.*
" myrtifolius *Muhl.*
Lechea intermedia *Leggett*
" leggettii *Britt. & Hollick*
" racemulosa *Lam.*
Lemna trisulca *Linn.*
Leptasea aizoides (*L.*) *Haw.*
Lilium philadelphicum *Linn.*
" superbum *Linn.*
Limnorchis hyperborea (*L.*) *Rydb.*
Limodorum tuberosum *Linn.*
Linaria canadense (*L.*) *Dumort.*
Lobelia cardinalis *Linn.*
" kalmii *Linn.*
" nuttallii *R. & S.*
Lonicera canadensis *Marsh.*
" oblongifolia (*Goldie*) *Hook.*
Lotus corniculatus *Linn.*
Ludwigia alternifolia *Linn.*
Lychnis alba *Mill.*
" flos-cuculi *Linn.*
Lycopodium alopecuroides *Linn.*
" clavatum *Linn.*
Lycopus americanus *Muhl.*
" uniflorus *Mx.*
" virginicus *L.*
Lysimachia quadrifolia *Linn.*
" terrestris (*L.*) *B. S. P.*
Lythrum salicaria *Linn.*
Malaxis unifolia *Michx.*
Malva moschata *Linn.*
Mariscus mariscoides (*Muhl.*) *Kuntze*
Medeola virginiana *Linn.*
Meibomia dillenii (*Darl.*) *Kuntze*
" grandiflora (*Walt.*) *Kuntze*
Melampyrum lineare *Lam.*
Memyanthes trifoliata *Linn.*
Mentha canadensis *Linn.*
Mikania scandens (*L.*) *Willd.*
Mimulus ringens *Linn.*

Mitella cordifolia *Linn.*
" nuda *Linn.*
Moehringia lateriflora (*L.*) *Fenzl.*
Monarda didyma *Linn.*
" mollis *Linn.*
" punctata *Linn.*
Muhlenbergia schreberi *J. F. Gmel.*
Myosotis scorpioides *Linn.*
Myrica caroliniana *Mill.*
Nabalus trifoliatus *Cass.*
Naumbergia thyrsiflora (*L.*) *Duby*
Nelumbo lutea (*Willd.*) *Pers.*
Neopieris mariana (*L.*) *Britt.*
Nothoholcus lanatus (*L.*) *Nash*
Nymphaea advena (*L.*) *Soland.*
Nyssa sylvatica *Marsh.*
Oenothera muricata *Linn.*
Ophioglossum vulgatum *Linn.*
Oxalis acetosella *Linn.*
Oxycoccus macrocarpus (*Ait.*) *Pursh*
" oxycoccus (*L.*) *MacM.*
Oxypolis rigidus (*L.*) *Raf.*
Panax trifolium *Linn.*
Panicularia grandis (*Wats.*) *Nash*
" nervata (*Willd.*) *Kuntze*
Panicum depauperatum *Muhl.*
" ashei *Pears.*
" dichotomum *L.*
" columbianum *Scribn.*
" meridionale *Ashe*
" virgatum *L.*
" " cubense *Griseb.*
Parietaria pennsylvanica *Muhl.*
Parnassia caroliniana *Michx.*
Pedicularis canadensis *Linn.*
Peltandra virginica (*L.*) *Kunth*
Penthorum sedoides *Linn.*
Pentstemon hirsutus (*L.*) *Willd.*
" pentstemon (*L.*) *Britt.*
Peramium pubescens (*Willd.*) *MacM.*
" tesselatum (*Todd.*) *Heller*
Persicaria muhlenbergii (*S. Wats.*) *Small*
Phalaris arundinacea *L.*
Phlox paniculata *Linn.*
" subulata *L.*
Phragmites phragmites (*L.*) *Karst.*
Physalis pruinosa *L.*
Plantago decipiens *Barneoud*
" rugelii *Decne:*
" virginica *Linn.*
Pogonia ophioglossoides (*L.*) *Ker.*
Polemonium vanbruntiae *Britt.*
Polycodium stamineum (*L.*) *Greene*
Polygala cruciata *L.*
" lutea *Linn.*
" nuttallii *T. & G.*
" pauciflora *Willd.*
" polygama *Walt.*
" senega *Linn.*
" verticillata *Linn.*
" viridescens *Linn.*
Polygonatum biflorum (*Walt.*) *Ell.*
Polygonum maritimum *Linn.*
" tenue *Michx.*
Polymnia canadensis *Linn.*
Potamogeton amplifolius *Tuckerm.*
" compressus *L.*
" natans *L.*
" pectinatus *L.*
" perfoliatus *L.*
Potentilla recta *Linn.*
Prunus cuneata *Raf.*
Pylaisia schimperi *R. & G.*
Pyrola americana *Sweet*
" elliptica *L.*
" uliginosa *T. & G.*
Pyxidanthera barbulata *Michx.*
Quercus ilicifolia *Wang.*
" marilandica *Moench*
Radicula palustris (*L.*) *Moench*
" sylvestris (*L.*) *Druce*
Ramischia secunda (*L.*) *Rydb.*
Ranunculus bulbosus *Linn.*
" fascicularis *Muhl.*
" hispidus *Michx.*
" pennsylvanicus *L. f.*
" scleratus *Linn.*
" septentrionalis *Poir.*
Rhexia virginica *Linn.*
Rhododendron punctatum *Andr.*
Rhyncospora alba (*L.*) *Vahl*
" glomerata (*L.*) *Vahl*
Ribes americana *L'Her.*
" glandulosum *Grauer*
" triste *Pall.*
Ridan alternifolia *L.*
Robertiella robertiana (*L.*) *Hanks*
Rosa virginiana *Mill.*
Rubus argutus *Link*
" hispidus *Linn.*
" procumbens *Muhl.*

Rubus sativus (*Bailey*) *Brainerd*
Rudbeckia sulivantii *Boynton & Beadle*
Sabbatia stellaris *Pursh*
Salicornia europea *L.*
Salix candida *Fluegge*
" lucida *Muhl.*
" sericea *Marsh.*
Sambucus racemosa *Linn.*
Samolus floribundus *H. B. K.*
Sanguinaria canadensis *Linn.*
Sanicula trifoliata *Bickn.*
Sarothra gentianoides *Linn.*
Savastana odorata (*L.*) *Scribn.*
Scheuchzeria palustris *L.*
Scirpus caespitosus *Linn.*
" paludosus *A. Nels.*
" robustus *Pursh*
" validus *Vahl*
Schrophularia leporella *Bicknell*
Scutellaria galericulata *Linn.*
Senecio aureus *Linn.*
Sericocarpus asteroides (*L.*) *B. S. P.*
Silene antirrhina *Linn.*
" pennsylvanica *Michx.*
Silphium integrifolium *Michx.*
" perfoliatum *Linn.*
" trifoliatum *Linn.*
Sisyrinchium arenicola *Bicknell*
" atlanticum *Bicknell*
" graminoides *Bicknell*
Sium cicutaefolium *Schrank.*
Smilax rotundifolia *L.*
Solidago houghtoni *T. & G.*
" odora *Linn.*
" ohioensis *Riddell*
" uniligulata (*DC.*) *Porter*
Sorghastrum nutans (*L.*) *Nash*
Stachys aspera *Michx.*
Steironema ciliatum (*L.*) *Raf.*
Syntherisma sanguinale (*L.*) *Dulac.*
Teucrium boreale *Bicknell*
" canadense *Linn.*
" littorale *Bicknell*
" occidentale *A. Gray*
Thalictrum dioicum *L.*
Tissa marina (*L.*) *Britt.*
" rubra (*L.*) *Britt.*
Tithymalopsis ipecacuanhae (*L.*) *Small*
Tithymalus cyperissias (*L.*) *Hill*
Tragopogon pratensis *Linn.*
Triantha glutinosa (*Michx.*) *Baker*
Trichostema dichotomum *L.*
Trientalis americana *Linn.*
Trillium cernuum *Linn.*
" undulatum *Willd.*
Uva-ursi uva-ursi (*L.*) *Britt.*
Uvularia grandiflora *Sm.*
" puberula *Michx*
Vaccinium angustifolium *Ait.*
Vagnera racemosa (*L.*) *Morong*
" stellata (*L.*) *Morong*
" trifolia (*L.*) *Morong*
Valeriana uliginosa (*T. & G.*) *Rydb.*
Verbena hastata *Linn.*
Vernonia noveboracensis (*L.*) *Willd.*
Veronica chamaedrys *Linn.*
" officinalis *Linn.*
" serpyllifolia *Linn.*
Viburnum cassinoides *Linn.*
" dentatum *Linn.*
" opulus *Linn.*
Vinca minor *Linn.*
Viola affinis *LeConte*
" brittoniana *Pollard*
" canadensis *Linn.*
" conspersa *Reichenb.*
" emarginata *LeConte*
" eriocarpa *Schw.*
" fimbriatula *J. E. Sm.*
" hirsutula *Brainerd*
" incognita *Brainerd*
" lanceolata *Linn.*
" nephrophylla *Greene*
" palmata *Linn.*
" papilionacea *Pursh*
" pedata *Linn.*
" primulifolia *Linn.*
" pubescens *Ait.*
" renifolia *A. Gray*
" sagittata *Ait.*
" selkirkii *Pursh*
" septentrionalis *Greene*
" sororia *Willd.*
" triloba *Schw.*
Vitis aestivalis *Michx.*
Waldsteinia fragarioides (*Michx.*) *Tratt.*
Woodsia ilvensis (*L.*) *R. Br.*
Xanthoxalis rufa *Small*
Xyris caroliniana *Walt.*
Zanthoxylum americanum *Mill.*
Zizia aurea (*L.*) *Koch*

NEW OR INTERESTING SPECIES OF FUNGI IV

a Fungi New to the State Flora

Camarosporium robiniae (West.) Sacc.

Of frequent occurrence on dead twigs of Robinia. Collected at North Bay, Oneida county, on Robinia viscosa. H. D. House, June 26, 1915, and at Orient, Long Island, on Robinia pseudo-acacia Linn. by Roy Latham, *no. 702*, February 4, 1915. Associated with Cucurbitaria elongata.

Cercospora lathyri Dearness & House, sp. nov.

Spots bluish gray and finally arid, limited by the veinlets and developing a narrow reddish boundary, 2–4 by 2–3 mm in extent.

Hyphae very short on numerous, evenly scattered, brownish bases, amphigenous.

Conidia more abundant on the upper surface, straight or slightly curved, continuous or obscurely 1–2-septate, 40–70 by $2\frac{3}{4}$–$3\frac{1}{4}$ μ.

On living leaves of Lathyrus maritimus (L.) Bigel. Wading River and Eastport. C. H. Peck, August, September. Type in the herbarium of the New York State Museum.

Cercospora microstigma Sacc.

On dead or dying leaves of Carex arctata Boott, Pecksport, Madison county. H. D. House, July 15, 1915. Also collected by Doctor Peck on Carex plantaginea Lam. at Taberg, Oneida county. The species is doubtless common on many Carices, and Professor Dearness records it also on C. granularis, C. albursina and C. laxiflora.

Cercospora pastinacae (Sacc.) Peck

On leaves of Pastinaca sativa L., Portage, N. Y. C. H. Peck, August 12th, (year not indicated). Professor Peck raised this from a variety of Cercospora apii Fres. to specific rank after an examination of material collected by J. M. Bates in Nebraska on the same host. Its occurrence in New York has never been recorded by Doctor Peck and this collection of his from Portage was among some undetermined material.

Coryne sarcoides (Jacq.) Tul.

On decayed logs of pine and chestnut. Karner, Albany county. H. D. House, November 2, 1916 (determined by F. J. Seaver).

Pileus purplish and waxlike when fresh, one-eighth to nearly one-half inch broad. Coryne urnalis (Nyl.) Sacc. has been collected by Doctor Peck at North Elba.

Coryneum pithoideum Dearness & House, sp. nov.

Acervuli in lenticel-like pustules thinly but regularly scattered, producing circular ruptures of the epidermis and contiguous cortex, 1–1.5 mm in diameter, seated in the cortex, not compact, of the size of the crateriform rupture, often appearing under the lens as if caespitose.

Conidia cask-shaped, variable in size, averaging about 25 by 12 μ, mostly 5-septate, brown with a hyaline cell at each end.

On dead stems of Celastrus scandens Linn., Kenwood swamp near Oneida, N. Y. H. D. House, May 15, 1915. Type in the herbarium of the New York State Museum.

This has the naked eye appearance of Coryneum pustulatum Peck, described on dead branches of oak and chestnut, but the spores are more nearly like those of Coryneum compactum B. & Br.

Cryptospora leiphaemoides Dearness & House, sp. nov.

Stromata scattered, raising the perforated epidermis and blackening the underlying cortical pustule, 1–1.5 mm; the disc .25–.3 mm, whitish at first, but becoming granular and darker when the very short, black ostiola appear thru it.

Perithecia 5 to 8 in a stroma, pale gray, lying in the unaltered cortex and in transection strongly resembling Diaporthe leiphaemia (Fr.).

Asci clavate-cylindrical, paraphysate, 65–90 μ, mostly about 75 x 10 μ. Sporidia parallel in the asci, cylindrical, subarcuate, subclavate, continuous, pluri-guttulate, 25–60 μ long, mostly about 45 μ, upper half 4–5 μ in the thickest part, lower half 2.5–3 μ.

On dead twigs of Quercus alba L. Astor woods, near Bronx Park, New York City. H. D. House, April 24, 1916. Type in the herbarium of the New York State Museum.

Externally the stroma and disc of this species resemble Cryptospora albofusca (C. & E.), also on Quercus, but it differs decidedly in its sporidia and paraphyses as represented in F. Col. 36 (material of Mr Ellis's collection). C. albofusca is described in the section Eucryptospora but in F. Col. 36 the sporidia are 3-septate in the copy examined.

Cryptospora suffusa (Fr.) Tul.

On dead twigs of Alnus rugosa (DuRoi) Spreng., Albany. H. D. House, January 30, 1916.

Cryptosporium robiniae Dearness & House, sp. nov.

Acervuli cortical, raising the epidermis into circular or elliptical uncolored pustules, gray in tangential sections, .2–1 mm showing when mature a central, circular, perforation in the epidermis.

Sporules hyaline, continuous, strongly falcate, .14–17 x 1–1.5 μ.

On dead twigs of Robinia pseudo-acacia L. Hills southeast of Rensselaer. H. D. House, May 4, 1916. Type in the herbarium of the New York State Museum.

Cylindrosporium iridis E. & H.

On living leaves of Iris versicolor L., Orient, N. Y. Roy Latham, October 15, 1915.

Dendrodochium acerinum Dearness & House, sp. nov.

Sporodochia verruciform, sparsely scattered, brown when dry, flat, .5–.7 mm in breadth, .2 mm in depth, apparently superficial on the cuticle but really developing from the cortex.

Conidia numerous, 4–5 x 1.5 μ, borne on curved, branching sporophores, the stalk and branches of which are of various lengths but usually totaling about 45 μ in length. The branches are 2 μ thick.

On dead twigs of Acer pseudoplatanus L. Menands, Albany county. H. D. House, December 2, 1914. Type in the herbarium of the New York State Museum.

Diaporthe americana Speg.

On dead twigs of Magnolia virginiana L. (M. glauca L.) Babylon, N. Y. H. D. House, April 21, 1916.

First collected in this country by Professor Ellis in January 1889 on Magnolia glauca and reported as D. americana Speg. Ten years afterward he published a revisal stating that the perithecia were too large for D. americana and proposed for his collection the name of Diaporthe magnoliae. The Babylon material shows marked variation, so much so, that Professor Dearness is inclined to regard the description of D. americana as covering the Babylon collection as well as Professor Ellis's D. magnoliae.

Diaporthe oncostoma (Duby) Fckl.

On dead twigs of Robinia pseudo-acacia L. Albany. H. D. House, November 26, 1915 and October 25, 1916.

Diaporthe paulula (C. & E.) Sacc.

On dead twigs of Nyssa sylvatica Marsh., Babylon, N. Y. H. D. House, April 20, 1916.

Diaporthe phomaspora (C. & E.) Sacc.

Grassy pond, Adirondack mountains, N. Y., on dead twigs of Myrica gale Linn. Dr C. H. Peck. Reported by Doctor Peck as "Diaporthe wibbei Nitsch.," a name which for the present must be stricken from the list of reported American fungi. This correction in determination was indicated by Professor Dearness after a most careful examination of the material in question.

Diaporthe sociata C. & E.

Catskill mountains, N. Y. on dead twigs of Benzoin aestivale (L.) Nees. Dr C. H. Peck, September.

Diatrypella subfulva (B. & C.) Sacc.

On dead twigs of Nyssa sylvatica Marsh., Shawangunk mountains, Dr C. H. Peck. (Determined by Dearness.)

Diplodia convolvuli Dearness & House, sp. nov.

Pycnidia thickly scattered, covered by the cuticle, perforate, depressed, .2 to .25 mm in diameter.

Conidia brown, uniseptate, but slightly when at all constricted, 18–24 by 9–12 μ, usually with similar cells but sometimes one is globose and the other subconic.

On dead stems of Convolvulus sepium Linn. Albany, N. Y. H. D. House, November 7, 1915. Type in the herbarium of the New York State Museum.

Diplodia subcuticularis Dearness & House, sp. nov.

Pycnidia densely gregarious, 12 to 18 in a circle 2 mm in diameter, dark brown, seated on the cortex, stellately rupturing the cuticle which soon becomes loosened from the cortex and shed.

Conidia brown, very tardily septate, not constricted at the septum, oblong-elliptic, ends rounded, 16–18 by 9–12 μ.

On dead branchlets of Sassafras variifolium (Salisb.) Kuntze. Sylvan Beach, Oneida county, N. Y. H. D. House, May 10, 1915.

This might be taken for a Sphaeropsis for in some cases the continuous spores appear to be more numerous than the septate ones. Diplodia decorticata C. & E., also on Sassafras, has strongly constricted spores in hysteriiform pycnidia.

Diplodia thalictri E. & D.

On dead stems of Thalictrum polygamum Muhl. Near Albany. H. D. House, June 13, 1915. (Determined by Dearness.)

Discosia kreigeriana Bres.

Karner, Albany county, on living and languishing leaves of Chamaenerion angustifolium (L.) Scop. (Epilobium angustifolium L.) H. D. House, July 20, 1915.

Eutypella deusta E. & E.

On decayed wood of oak limbs, Orient Point, N. Y. Roy Latham, May 1, 1911.

Eutypella gleditschiae Berl.

On dead twigs of Gleditsia triacanthos L. Orient, N. Y. Roy Latham, April 2, 1916. (*No. 724.*)

Eutypella staphyleae Dearness & House, sp. nov.

Stromata bullate, incorporating the cambium, lodged on the wood, leaving a whitened area when removed, immediately surrounded by a dark line which does not penetrate the wood, sometimes confluent, base mostly irregularly elliptic, 2–4 by 1–3 mm.

Perithecia 3 to 5 in a stroma or appearing numerous when confluent, black, globose, large, about 1 mm in diameter, ostiola sulcate, stout, short, .2 mm in width and height.

Asci long-clavate to fusoid, 60–75 by 8–12 μ, stipe linear, 20–80 μ long, paraphysate.

Sporidia allantoid, dark amber-colored, mostly 15–18 by 4 μ, extremes 14–20 by $3\frac{1}{2}$–$4\frac{1}{4}$ μ.

On dead stems of Staphylea trifolia Linn. Near Albany. Collected by C. H. Peck in April (year not indicated).

Gloeosporium lappae Dearness & House, sp. nov.

Spots subcircular, gray-brown with arid centers tending to crack and break away, the arid portions surrounded by several rather obscurely circinating ridges close together.

Acervuli epiphyllous on the arid areas, nearly concolorous, 40–100 μ; spores hyaline, with 2 to 3 nuclei causing some of them to appear uniseptate, 6–9 x 3 μ.

On living leaves of Arctium minus Schk. Albany. H. D. House, August 1916. Type in the herbarium of the New York State Museum.

Hendersonia vagans Fckl.

On dead twigs of Aronia melanocarpa (Michx.) Britt. Sylvan Beach, Oneida county. H. D. House.

There is nothing in the brief description of this species in Saccardo to separate the Sylvan Beach material from H. vagans Fckl., although they may not be the same. The Sylvan Beach material has spores 10–15 x 4–5 μ, and the stipes 5–40 x 2 3 μ. Associated with an unidentified Valsa.

Hypocrea sulfurea (Schw.) Sacc.

Covering over a growth of Exidia glandulosa on twigs and limbs of Populus and Alnus. Karner, Albany county. C. H. Peck, September. (Determined by Dr F. J. Seaver.) Reported by Doctor Peck as Hypocrea citrina (Pers.) Fr.

Hysterographium lesquereuxii (Duby) Sacc.

On dead branches of Gleditsia triancanthos L. Orient, N. Y. Roy Latham, April 8, 1915.

Haplosporella velata E. & B.

On dead stems of Celastrus scandens L. Karner, Albany county. H. D. House, June 16, 1915.

Leptosphaeria consessa (C. & E.) Sacc.

On dead stems of Helianthus annuus Linn. Oneida. H. D. House, June 5, 1916.

Leptosphaeria myricae Dearness & House, sp. nov.

Perithecia gregarious, globose-conical, nearly superficial, .3 x .4 mm in diameter above the bark; ostiola short, thick and blunt.

Asci linear-cylindrical, 80–120 x 5–5½ μ; paraphyses linear, abundant.

Sporidia strictly uniseriate or overlapping, brown, 3-septate, 12–15 x 4–5 μ.

On dead twigs and branches of Myrica gale L. Grassy pond, Adirondack mountains. C. H. Peck (date of collection unknown). Type in the herbarium of the New York State Museum. The specimens also contain Diaporthe phomaspora (C. & E.) Sacc. and Trichopeziza myricae (Peck) Sacc.

Leptothryium dearnessii Kabat & Bubak

On dead brown areas of living, languishing, or dead leaves of Erigeron philadelphicus L. Albany. H. D. House, November 1, 1916. Doctor Peck has also collected this upon Erigeron annuus, reported as L. punctiforme B. & C. He also noted that it differed from L. punctiforme in being upon both sides of the leaf and in other minor particulars.

Macrophoma ceanothi Dearness & House, nom. nov. (Macrophoma peckiana D. & H. Bul. N. Y. State Museum 179:31. 1915. Not Berl. & Vogl.)

On dead stems of Ceanothus americanus L., North Greenbush (Peck, type). Albany (House).

Massarinula brassicae Dearness & House, sp. nov.

Perithecia densely gregarious, carbonaceous, rugulose, papillate globose-conic, erumpent-superficial, 200–300 μ. Asci clavate, wal 3 μ thick, 4 or 8, mostly 8-spored, 70 to 120 μ, mostly about 90 x 12–15 μ. Sporidia chiefly biseriate, hyaline, fusoid, subarcuate, in sheath 2 μ thick, 1-septate, the upper cell rather abruptly thickened at the septum, sometimes each cell seems obscurely transversely divided, the sheath extended at the end, giving some sporidia the appearance of being obtusely appendiculate.

On dead stems of Brussels sprouts (Brassica oleracea L. var. gemmifera Hart.) Orient, N. Y. Roy Latham, September 1915. Type in the herbarium of the New York State Museum.

Metasphaeria anthelmintica (Cke.) Dearness, comb. nov.

(Sphaeria anthelmintica *Cke.;* Leptosphaeria *Sacc.*)

On dead stems of Chenopodium album L. Albany. H. D. House, November 7, 1916. Cooke placed this in Heptameria, a fact that throws doubt on Saccardo's location of it in Leptosphaeria. The spores are so dilutely colored that Metasphaeria is the better location for it as suggested by Professor Dearness. Most of the spores singly seem quite hyaline.

Microdiplodia laurina Dearness & House, sp. nov.

Pycnidia scattered, intracortical, covered by the adherent cuticle which ruptures in a narrow cleft, globose, dark brown, about .3 mm in diameter.

Conidia brown, 1-septate, oblong-elliptic, 9–12 by $3\frac{1}{2}$–5 μ.

On dead branchlets of Sassafras variifolium (Salisb.). Kuntze, Sylvan Beach, Oneida county, N. Y. H. D. House, May 1915. Also collected on same host at Albany, N. Y., November 1915.

Very distinct from Microdiplodia sassafras (Tracy & Earle) where a subhyaline septum divides the spores unequally.

Mollisia plicata (Rehm.) Sacc.

var. **baptisiae** Dearness & House, var. nov.

Asci 40–45 x 5–6 μ; paraphyses linear, thickened at the apex; spores 1-celled, about 6–8 x 2–$2\frac{1}{2}$ μ.

On dead twigs or stems of Baptisia tinctoria L. Manorville, N. Y. H. D. House, June 20, 1916.

Myxosporium rhois (B. & C.) Sacc.

On dead twigs of Rhus glabra, near Albany. H. D. House, November 25, 1915.

Phoma ochra Cooke

On dead stems of Hibiscus moscheutos L. Oceanside, N. Y. H. D. House, July 28, 1916. The spore measurements are nearest those given for Phoma malvacearum West., but other characters seem to relate it more closely to P. ochra, from which it differs only in having smaller spores (7 x 3 μ), instead of 10–12 x $3\frac{1}{2}$–4 μ.

The same specimens contain an interesting Diaporthe which seems referable to D. arctii Lasch.

Phoma oleracea var. **meliloti** Sacc.

On dead stems of Melilotus albus Desr. Karner, Albany county. H. D. House, April 10, 1916.

Phoma vaccinii Dearness & House, sp. nov.

Pycnidia minute, numerous, globose, 3 or 4 to the lineal mm, blackening the stems when erumpent, subcuticular at first then breaking through longitudinal clefts in the epidermis; ostiola round, black, shining; conidia hyaline, minute, oblong, straight or curved, 5 x 1.5–2 μ.

On dead stems of Vaccinium corymbosum L. Astor woods, near Bronx Park, New York City. H. D. House, May 17, 1916. Type in the herbarium of the New York State Museum.

Phyllosticta opaca E. & E.

On leaves of Ilex opaca L. Sold in the market, Albany, December 22, 1915.

Physalospora obtusa (Schw.) Sacc.

On dead stems of Rubus odoratus L. North of Rensselaer, N. Y. H. D. House, April 27, 1916.

Puccinia angelicae (Schum.) Lagerh.

On leaves of Angelica atropurpurea L. North of Rensselaer. Dr C. H. Peck, June. The year is not indicated and Doctor Peck gives the locality as "North Greenbush." Identified by J. C. Arthur who states that the species has heretofore been known in America only from the eastern Rocky mountain region.

Puccinia karelica Tranz.

Aecial stage on Trientalis americana L. Marsh east of Lake George, Warren county. S. H. Burnham, June 16, 1897. Telial stage on Carex diandra Schk. Hannibal, Oswego county. C. S. Sheldon, May 30, 1882. On Carex canescens L. Boonville. Dr J. V. Haberer, June 20, 1912. On Carex magellanica Lam. Summit. C. H. Peck. (Determined by Arthur.)

Puccinia magnusiana Korn.

On Phragmitis phragmitis (L.) Karst. Cayuga marshes. Collected by Dr C. H. Peck. (Determined by Arthur.)

Puccinia McClutchiana Diet. & Holw.

On Scirpus rubrotinctus Fernald. West Albany. Collected by Dr C. H. Peck. (Determined by Arthur.)

Puccinia minutissima Arth.

The aecial stage (Aecidium nesacae Ger.) occurs upon Decodon verticillatus (L.) Ell. The telial stage occurs upon Carex filiformis L. Karner. C. H. Peck. Upon the same host, Hannibal, Oswego county. C. S. Sheldon, May 30, 1882.

Puccinia ornata Arth. & Holw.

On living leaves of Rumex britannica L. Sylvan Beach, Oneida county. H. D. House, September 18, 1916. (Determined by Arthur.) New to New York State. This is a short cycle rust in which the teliospores germinate immediately upon maturing, and it therefore possesses no alternate host. Its range is from Maine and New Hampshire to Wisconsin and Minnesota.

Puccinia patruelis Arth.

The aecial stage on Lactuca sp. Near Albany, collected by C. H. Peck, June. (Determined by Arthur.)

Puccinia poarum Niels.

On Poa annua L. Jamesville, Onondaga county. H. D. House, August 9, 1915. (Determined by Arthur.)

Puccinia rubellum (Pers.) Arth.

(P. arundinacea *Hedw.*)

On Phragmitis phragmitis (L.) Karst. Montezuma marshes. Collected by Dr C. H. Peck. (Determined by Arthur.)

Puccinia uniporula Orton

The two following collections have been referred to this species by Doctor Arthur: On Carex conoidea Schk., Pecksport, Madison county. H. D. House, July 2, 1915. On Carex virescens Muhl., Sand Lake. C. H. Peck.

Ramularia brunellae E. & E.

On living leaves of Prunella vulgaris L. Jamesville, Onondaga county. H. D. House, June 28, 1916. Also with Septoria brunellae E. & E. upon the same leaves.

Ramularia lanceolata Dearness & House, sp. nov.

Spots brick-red, indefinite, alike on both sides of the leaf, where numerous the leaf becomes yellowish, without an arid center as in Ramularia plantaginis E. & M., nor with a definite border line as in Ramularia peckii Sacc. & Syd.

Hyphae fasciculate, amphigenous, geniculate, yellowish, 25–45 x 4 μ; conidia hyaline, cylindrical, ends rounded, 0–3-septate, 15–33 x 5–6 μ.

On living and languishing leaves of Plantago lanceolata L. Oneida, Madison county. H. D. House, August 1916. Type in the herbarium of the New York State Museum.

Septoria gentianae Dearness & House, sp. nov.

Spots arid, small, subcircular, 1 to 5 mm in diameter, surrounded by a very narrow, sharply raised border extending outward into a reddish zone; when numerous the whole leaf becomes dilute brown.

Pycnidia epiphyllous, brown, 30–35 μ, with a minute opening. Sporules continuous, 15–24 μ, but averaging 18–20 x .5 μ.

On leaves of Gentiana quinqueflora L. Taberg, Oneida county. H. D. House, August 1914. Type in the herbarium of the New York State Museum.

Septoria microsora Speg. on Gentiana, in Europe, is hypophyllous and is said to have widely gaping ostiola and pluriseptate sporules.

Septoria macrosporia Dearness

On living leaves of the white daisy (Chrysanthemum leucanthemum L.) Albany. H. D. House, November 1, 1916.

Septoria rudbeckiae E. & H.

var. **oaklandica** Sacc.

On living and languishing leaves of Rudbeckia hirta L. Albany. H. D. House, November 13, 1915. (Determined by Dearness.)

Sphaerographium hystricinum (Ell.) Sacc.

var. **viburni** Dearness & House, var. nov.

This variety on stems of Viburnum cassinoides has pungent, beaked pycnidia nearly 1 mm long. Sporules 15–30 x 2 μ, subarcuate, acute, simple and continuous or paucinucleate, borne on narrow, branching sporophores varying in length from 5 μ to that of the sporules.

On dead stems of Viburnum cassinoides L. Babylon, N. Y. H. D. House, April 20, 1916. Type in the herbarium of the New York State Museum.

Professor Peck figured the pycnidia and sporules of this form on Viburnum nudum in the 38th report. Mr Ellis's type was found upon Azalea and described as having sporules 25 μ long on stipes 35 μ long.

Sphaeropsis liquidambaris Dearness & House sp. nov.

Pycnidia .3 mm, globose, gregarious, surrounding the twigs, covered by the epidermis in which narrow clefts expose the very short ostiola; conidia tardily yellow-brown, on sporophores of about

their own length, and half their thickness, various in shape, from globose to oblong-elliptic, but mostly subpyriform, 17–22 x 6–10 μ.

On dead twigs of Liquidambar styraciflua L. Astor woods near Bronx Park, New York City. H. D. House, May 17, 1916. Type in the herbarium of the New York State Museum.

Sphaeropsis punctata Dearness & House sp. nov.

Pycnidia minute, 50–110μ in diameter, thickly scattered, as many as 20 in a circle 2 mm in diameter; black, conical ostiola puncturing the thin epidermis.

Conidia pale brown, oblong-elliptic, 18–22 x 9–10 μ on short basidia.

On dead branchlets of Sassafras variifolium (Salisb.) Kuntze. Sylvan Beach, Oneida county. H. D. House, May 10, 1915. Also Albany, November 26, 1915 (type). Astor woods, near Bronx Park, New York City. H. D. House, May 17, 1916. Type in the herbarium of the New York State Museum.

S. sassafras C. & E. has papillaeform pycnidia and conidia 30–35 x 5 μ; S. seriatus Peck also on this host is characterized by "hard sclerotoid perithecia in linear arrangement." (33d Report, p. 24.)

Taphrina quercus (Cooke) Sacc.

On living leaves of Quercus velutina Lam. Orient, N. Y. Roy Latham, October 4, 1915.

Trichopeziza opulifoliae (Schw.) Sacc.

On dead stems of cultivated Spiraea. Oneida. H. D. House, June 20, 1915. Associated with Diaporthe neilliae Pk.

Urophlyctis pluriannulatum (B. & C.) Farlow

(Uromyces pluriannulatum *B. & C.*; Synchytrium, *Farlow*)

On living leaves, stems and peduncles of Sanicula marylandica L. Oneida, Madison county. H. D. House, June 10, 1916. (Determined by Prof. H. S. Jackson.)

Valsa americana B. & C.

On dead twigs of Malus malus (L.) Britt. Albany. H. D. House, February 20, 1915. Determined by Professor Dearness, who says concerning it, "This is the same as Mr Ellis named for

me Valsa americana. The species is not fully described. This material is a long-stiped, long-paraphysate species." Upon the same twigs occurs Sphaeropsis mali (West) Sacc.

Valsa caryigena B. & C.

On dead twigs of Hicoria minima Britton. Van Cortlandt Park, New York City. H. D. House, April 20, 1916. Also with Sphaeropsis linearis Peck (S. caryae) on the same twigs.

Valsa ceratophora Tul.

On dead twigs of Sassafras variifolium (Salisb.) Kuntze. Van Cortlandt Park, New York City. H. D. House, April 20, 1916. The same twigs contain Sphaeropsis punctata Dearness & House, and a Cytospora which doubtless belongs to the Valsa and which may be Cytospora sphaerocephala Curtis.

Valsa cincta Fr.

On dead stems of Amelanchier canadensis (L.) Medic. Clear pond, Adirondack mountains, and Aiden Lair, Essex county, on dead twigs of Amelanchier bartramiana (Tausch) Roem. C. H. Peck, July. Associated with Sphaeronema pruinosum Peck.

Valsa etherialis E. & E.

On dead limbs of Acer rubrum L. Albany. H. D. House, November 2, 1913 and May 1914.

Valsa nyssae Grev.

On dead twigs of Nyssa sylvatica Marsh. Astor woods, Bronx, New York City. H. D. House, April 26, 1916. (Determined by Dearness.)

b **Notes on Fungi**

Bremia lactucae Regel.

On living leaves of Lactuca hirsuta Muhl. Near Albany, N. Y. H. D. House, November 13, 1915. Also known as Peronospora gangliformis (Berk.) DeBary.

Cintractia junci (Schw.) Trel.

On the inflorescence of Juncus tenuis L. near Baldwinsville, Onondaga county. H. D. House, June 27, 1916.

Diaporthe obscura (Peck) Sacc.

On dead stems of Geum strictum Ait. Eaton and Pecksport, Madison county. H. D. House, July 2 and 3, 1915. The characters accord very closely with the description by Peck (on Rubus strigosus) and this collection constitutes a new host for the species.

Diaporthe (Chorostate) oxyspora (Peck) Sacc.

(Sacc. Sylloge 1:627. 1882)

Valsa oxyspora Peck. Rep. N. Y. State Mus. 28, p. 75, pl. II, f. 26–29. 1876
Valsa ocularia C. & E. Grev. VI:11, pl. 95, f. 3. 1877
Diaporthe ocularia Sacc. Sylloge 1:616. 1882
Diaporthe epimicta E. & E. N. Am. Pyr. 439. 1892

The type of Valsa oxyspora was stated by Doctor Peck to be on Quercus (collected at Sand Lake, August 1874). This was a case of mistaken host identification which he later corrected but without study of related species upon the host (Nemopanthus mucronata (L.) Trel.) or other hosts of the Holly family. Meanwhile there has accumulated in the state herbarium specimens of Diaporthe upon Ilex and Nemopanthus under the additional names of D. ocularia and D. epimicta. Professor Dearness has made a careful study of the material here and in his own herbarium and specimens named by Mr Ellis as D. epimicta (and with particular care), are identical with D. oxyspora (Mechanicville on Ilex verticillata; Southfield on Ilex verticillata; Karner on Ilex verticillata and Sand Lake on Nemopanthus mucronata (type)). In all these collections the appendage of the spores seems to disappear with age, and suggests that D. ocularia is also the same, since other characters are very similar. Recently collected by Roy Latham, Orient, N. Y., on Ilex verticillata (February 7, 1915).

Funalia rigida (Berk. & Mont.)

Trametes rigida Berk. & Mont. Ann. Soc. Nat. III. 11:240. 1849
Polystictus extensus Cooke. Sacc. Syll. Fung. 6:244. 1888
Polystictus rigens Sacc. & Cub.; Sacc. Syll. 6:274. 1888
Coriolopsis rigida Murrill, North American Flora 9:75. 1907

Sporophore annual, sessile, varying to resupinate, margin thin and acute, 0–5 x 2–10 cm, usually about 1 cm thick or less, rather fragile when dry, densely hispid or hirsute, yellowish brown or

darker with age; context very light brown; tubes usually not over 1 mm long, sometimes in large pileate specimens 3 to 5 mm long, angular, variable in size, sometimes irregular, averaging 2–3 a mm; cystidia none; spores cylindrical, 9–10 x 3 μ.

On dead limbs and trunks of Poplar. Albany, Westport and Horicon. Collected by Doctor Peck.

This species is reported by Doctor Peck as Trametes trogii Berk. in the 32d Report, page 35 (1879); it is the species described by J. J. Neuman (Polyporaceae of Wisconsin, page 39, 1914) under the name of Trametes trogii Berkeley and so far as the description of this in Fries (Hym. Eur. 583. 1874) goes, it may be the same as Berkeley's species. The species is placed in Coriolopsis by Doctor Murrill in Polyporaceae of the North American Flora (vol. 9), but is described by L. O. Overholts in the Polyporaceae of the Middle-western United States (p. 69) as Trametes rigida. The range of the species as given by Murrill should be extended northward to Essex county, New York, southern Ontario and Wisconsin.

Goniopsis cookeana (Ger.) Sacc.

Collected at Orient Point, Long Island, by Roy Latham upon the following hosts: Quercus alba (dead wood), Andromeda ligustrina (dead decorticated branches), Myrica caroliniensis (dead branches), Rhus glabra (dead decorticated branches).

Gymnopilus magna (Peck) Murrill

(Flammula magna *Peck;* Cortinarius validipes *Peck*)

Dr C. H. Kauffman, who has examined the species of Cortinarius in the state herbarium, suggests that the type specimen of Cortinarius validipes belongs in Flammula, and comparison seems to indicate that it is the same as Flammula magna described first from Westchester county. A collection also labeled C. validipes and made by S. H. Burnham at West Fort Ann (growing in a mass of sawdust and chips), belongs to Pholiota and is doubtless P. destruens (Brond.) Sacc.

Leptosphaeria subconica (C. & P.) Sacc.

On dead stems of Impatiens biflora Walt. Karner, Albany county. C. H. Peck, August 1906. (Determined by Dearness.) The type collection of this species appears to be upon

Ambrosia trifida, although Doctor Peck did not definitely determine the host. It has also been collected upon Solidago.

Leptostromella hysterioides (Fr.) Sacc.

On dead stems of Helianthus decapetalus L. Oneida. H. D. House, May 15, 1915. Spores curved, 20–21 x 2–2½ μ.

Microdiplodia paupercula (B. & Br.) Dearness, comb. n.

(Diplodia paupercula *B. & Br.*)

Originally described on Lonicera. Our material is on Sambucus canadensis L. (Cascadeville) Adirondack mountains. C. H. Peck (40th Rep't, p. 60, 1887). See N. Am. Fungi No. 419 and Saccardo Sylloge 3:345, 1884. The spore measurements in Saccardo are given as 10 x 5 μ. In Doctor Peck's material only exceptional spores measure that large, the average being 7–9x 3.5–5 μ.

Nigredo perigynia (Halst.) Arth.

On Carex flava L. Peterboro, Madison county. H. D. House, June 12, 1916. (Determined by Arthur.) Also collected by Doctor Peck upon Carex arctata Boott; and on Carex scoparia Schk.

Phialea pulchella (Fckl.) Sacc.

Near Albany, on fallen needles of Pinus rigida, H. D. House, November 30, 1916.

Phoma infossa E. & E.

On dead twigs of Fraxinus pennsylvanica Marsh. Sylvan Beach, Oneida county. H. D. House, June 21, 1915. Also collected at Alcove, Albany county, by C. L. Shear (N. Y. Fungi No. 369).

Phoma pallens B. & C.

On dead carpels of Celastrus scandens L. Karner, Albany county. H. D. House, April 29, 1916. Also collected in May 1908 by Doctor Peck.

Phyllosticta latifolia E. & E.

On living leaves of Kalmia latifolia L. Merrick, N. Y. H. D. House, June 16, 1916. Professor Dearness verifies this by

comparison with a cotype, and questions that this species has the pycnidial characters of a good Phyllosticta.

Pleospora herbarum (Pers.) Rabh.

On dead stems of Triglochin maritimum L. Bergen swamp, Genesee county. H. D. House, June 2, 1916.

Pyrenopeziza compressula Rehm.

On dead stems of Helianthus lacinatus L. Oneida H. D. House, June 5, 1916. (Determined by Dearness.)

Puccinia angustata Peck

Manorville, N. Y., on Scirpus cyperinus (L.) Kunth. H. D. House, June 20, 1916. (Determined by Arthur.) The other host species for this rust in New York are Scirpus atrocinctus Fernald; S. atrovirens Muhl.; S. sylvaticus L. The type of this rust is supposed to occur upon S. sylvaticus collected near "West Albany," by Doctor Peck, but since that sedge probably does not occur in that region the identity of the host remains in doubt. The aecial stage (Aecidium lycopi Ger.) is frequent upon various species of Lycopus.

Puccinia ellisiana Thum.

The aecial stage was collected at Manorville, N. Y., on leaves of Viola lanceolata L., June 20, 1916. It also occurs upon leaves of Viola blanda and V. affinis (Aecidium mariae-wilsoni Peck). The telial stage appears to be rather common upon Andropogon scoparius Michx. and A. furcatus Muhl. at Karner, Albany county, and on Long Island.

Puccinia extensicola Plowr.

The following species are represented among the hosts for the aecial stage in the state herbarium: Aster cordifolius, A. macrophyllus, A. novae-angliae, A. longifolius, A. puniceus, Erigeron pulchellus, E. philadelphicus, E. annuus, E. ramosus, Leptilon canadense, Euthamia graminifolia, Solidago canadensis, S. latifolia, S. odora, S. lanceolata, S. juncea, S. rugosa, S. thrysoidea and S. uliginosa.

The hosts for the telial stage as represented in collections from New York State are: Carex crawfordii; C. backii, C. houghtonii, C. pennsylvanica, C. prairea, C. trisperma, C. tenella, C. vulpinoidea and Dulichium arundinaceum (including Puccinia dulichii Syd.).

Puccinia majanthae (Schum.) Arth.

The aecial stage on Vagnera stellata (L.) Morong. Buffalo. G. W. Clinton. On Uvularia sessilifolia L. Babylon. J. S. Merriam. The telial stages on Phalaris arundinacea L., Copake, and Watkins. Dr C. H. Peck. (Determined by Arthur.) The basis for Puccinia linearis Peck (= P. striatula Peck).

Puccinia mesomejalis B. & C.

Elk Park, Catskill mountains, on Clintonia borealis L. Dr L. H. Pennington, June 24, 1914.

Puccinia orbicula Pk. & Clinton

On leaves of Nabalus albus L. Jamesville. H. D. House, June 28, 1916. (Determined by Arthur.) The State Museum herbarium also contains collections of this rust upon the same host from Buffalo (Clinton), Cedarville and Watkins (Peck).

Ramularia urtica Ces.

On living and languishing leaves of Urtica gracilis Ait. Fisher's, Ontario county. H. D. House, June 3, 1916.

Rhytisma andromedae Fr.

Hempstead, N. Y., on leaves of Lyonia ligustrina (L.) DC. (Andromeda, Muhl., Xolisma, Britton). Common on leaves of Andromeda polifolia L. (including A. glaucophylla Link., the Bog Rosemary), but not previously reported upon the Male Berry (Lyonia ligustrina).

Scoleconectria scolecospora (Bref.) Seaver

On dead twigs of Nyssa sylvatica Marsh. Babylon, N. Y. H. D. House, April 20, 1916. A species of frequent occurrence upon pine, but rarely recorded on hardwood species.

Septoria krigiae Dearness & House, sp. nov.

Spots 1 to 2 mm broad, yellow-brown with reddish margins 1 mm wide. Pycnidia usually one, seldom more than three on a spot, central, mostly epiphyllous, 50 μ; sporules continuous, straight or flexuous, 24–60 x 1 μ.

On living leaves of Krigia amplexicaulis Nutt. Chelten Hills, Montgomery county, Pennsylvania. Martha Shoemaker, September 1879. Type in the herbarium of the New York State Museum.

Septoria sicyi Peck

On living leaves of Sicyos angulatus L. Liverpool, Onondaga county. H. D. House, August 12, 1915.

Septoria xanthismatis Dearness & House, sp. nov.

Spots sordid, yellowing of the affected portions of the leaf or of the whole leaf instead of definite maculae. Pycnidia amphigenous, innate, single or more or less gregarious and in the latter case making the area darker than the surrounding parts; stromata slightly erumpent, sometimes distinguishable by short yellow cirrhi of exuded sporules.

Sporules hyaline, continuous, curved or flexuous, 30–75 x 1–1.5 μ, exceptionally exceeding 100 μ in length.

On living leaves of Xanthisma texanum DC. Fort Sill (Indian Terr.), Oklahoma, C. S. Sheldon, August 1891. Type in the herbarium of the New York State Museum.

Sphaerella pontederiae Peck

On living, languishing and dead leaves of Nymphaea advena Ait. In a marsh near Hempstead, N. Y. H. D. House, June 19 and September 8, 1916.

This was first described as Sphaerella paludosa E. & E. but Mr Ellis later referred it to S. pontederiae (Fungi Col. no. 419). On Pontederia the perithecia are hypophyllous while on Nymphaea they are mostly epiphyllous, otherwise the description of Peck's species agrees with this.

Sphaeropsis aristolochiae Dearness & House, sp. nov.

Pycnidia numerous, nearly covering the affected areas, cortical, globose-conic, cuticle cleft or irregularly ruptured by the apex and short black ostiola, .3–.4 mm.

Conidia dark brown, subpyriform to oblong with rounded ends, nucleate, 18–20 x 10–11 μ, on sporophores about 10 x 3 μ.

On dead twigs of Aristolochia clematitis L. Kent, Ohio. H. D. House, March 1916. Type in the herbarium of the New York State Museum.

This is quite different from S. squiereae Clint. on Aristolochia. The latter has spherical conidia 15 μ, with walls 4–5 μ thick.

Sphaeropsis platani Peck

On dead twigs of Platanus occidentalis L. Van Cortlandt Park, New York City. H. D. House, April 20, 1916. Associated with a Cytospora of undetermined relationship.

Sphaeropsis tulipastri House, nom. nov.

Sphaeropsis dearnessii Sacc. & Trott. in Sacc. Syll. 22:978. 1913. Not S. dearnessii Sacc. & Syd. in Sacc. Syll. 16:922. 1899.
Sphaeropsis magnoliae Ell. & Dearn. Fungi Col. n. 2087. 1905 Not S. magnoliae Magnaghi (1902)

On dead twigs of Magnolia acuminata L. (Tulipastrum acuminatum Small). Ontario. J. Dearness. Associated with Valsaria magnoliae. Sphaeropsis dearnessii Sacc. & Syd. was a name proposed for S. mori E. & E. on Morus, and is the same as Sphaeropsis sepulta E. & E., but its publication invalidates the later use of the same name for the Sphaeropsis on Magnolia.

Tranzschelia punctata (Pers.) Arth.

On living leaves of seedlings of Prunus serotina Ait. in open woods near Albany. H. D. House, October 23, 1916. No infections upon the leaves of Prunus serotina which were older than the seedling stage could be found. This rust seems to have been but rarely collected in this State, the herbarium containing two collections by G. W. Clinton, one made at Buffalo, and the other at Albany. The aecial stage upon Anemone quinquefolia, Hepatica and Thalictrum has been frequently collected.

Tympanis turbinata Schw.

On dead stems of Viburnum cassinoides L. Babylon, N. Y. H. D. House, April 20, 1916. Substipitate, erumpent; asci about 100–110 x 18–20 μ, spores numerous, 3–4 x $\frac{3}{4}$ μ.

Uredinopsis mirabilis (Peck) Magnus

On living and languishing fronds of the Virginia Chain fern (Woodwardia virginica (L.) Sm.). . Sylvan Beach, Oneida county. H. D. House, August 12, 1916.

Valsa liquidambaris (Schw.) Cooke

On dead stems of Hamamelis virginiana L. Orient Point, N. Y. Roy Latham, October 30, 1911. A new host species. The asci are 30–33 x 8 μ, the spores eight in an ascus, 8–9 μ x 2 μ, hyaline, allantoid.

Vermicularia violae-rotundifoliae (Sacc.) House

(V. peckii *var.* violae-rotundifoliae Sacc.)

On living leaves of Viola rotundifolia Michx. Taberg, Oneida county. H. D. House, June 7, 1916.

c Fungi Noveboracenses

The following list of New York fungi, containing 119 species, was determined recently by Dr P. A. Saccardo of Padova, Italy, from certain collections by C. H. Peck and H. D. House, sent to him for study. Several of them are new species and their descriptions as well as notes upon the others are found in Annales Mycologici, XIII, p. 115–22 (Berlin) 1915 and in Nuovo Giornale Botanico Italiano, XXIII, no. 2, p. 2–15. 1916.

The species in heavy faced type were described as new by Saccardo, and the cotypes are in the herbarium of the New York State Museum.

Aposphaeria allantella *Sacc. & Roum.* Clarksville. On wood of Quercus rubra (Peck)

Aposphaeria striolata *Sacc.* Rensselaer. On decorticated log of Populus deltoides (Peck)

Ascochyta pirina *Pegl.* Sylvan Beach. On living leaves of Aronia arbutifolia (Peck)

Botryosphaeria quercuum (*Schw.*) *Sacc.* Albany. On dead twigs of Quercus rubra (House)

Cercospora ampelopsidis *Peck.* Albany. On languishing leaves of Ampelopsis quinquefolia (House)

Cercospora rhoina *C. & E.* Bolton Landing. On leaves of Rhus copallina (Peck)

Diaporthe peckiana (*Sacc.*) (**Chorostate peckiana** *Sacc.*) Catskill mountains. On dead branches of Fraxinus (?) ameri-

c a n a . (Peck). The host is quite certainly not Fraxinus and the texture and grain is more like maple.

Cladosporium caricicola *Corda*. Brownville. On dead leaves of C a r e x a r c t a t a (Peck)

Coniosporium tumulosum *Sacc.* Tupper Lake. On decorticated wood of P i n u s s t r o b u s (House)

Cucurbitaria rosae *Sacc. & Wint.* Bergen swamp. On dead stems of S p i r a e a s a l i c i f o l i a (Peck)

Cucurbitaria stenocarpa *E. & E.* Southfield. On dead twigs of R h u s c o p a l l i n a (Peck)

Curreya peckiana *Sacc.* Tupper Lake. On dead twigs of N e m o p a n t h e s m u c r o n a t a (House)

Cytospora minuta *Thüm.* Sand Lake. On dead branches of F r a x i n u s a m e r i c a n a (Peck)

Cytospora phomopsis *Sacc.* Albany. On dead stems of S a s s a f r a s v a r i i f o l i u m (House)

Dendrophoma phyllogena *Sacc.* Eaton. On languishing and dead leaves of C h a m a e d a p h n e c a l y c u l a t a (House)

Diatrype asterostoma *B. & Br.* (not *E. & E.*) *var.* betulae *Sacc.* Bashfisch. On dead branches of B e t u l a l u t e a (Peck)

Diatrypella betulina (*Pk.*) *Sacc.* Oneida. On dead limbs of B e t u l a l u t e a (House)

Diatrypella cephalanthi (*Schw.*) *Sacc.* Southfield. On dead branches of C e p h a l a n t h u s o c c i d e n t a l i s (Peck)

Diatrypella decorata *Nits.* Sand Lake. On dead branches of B e t u l a l u t e a (Peck). In Europe this occurs on B e t u l a a l b a .

Didymosphaeria empetri (*Fr.*) *Sacc.* Mount Marcy. On leaves of E m p e t r u m n i g r u m (House)

Dimerosporium balsamicola (*Pk.*) *E. & E.* Tupper Lake. On leaves of A b i e s b a l s a m e a (House). North Elba. (Peck)

Diplodia benzoina *Sacc.* Karner. On dead twigs of B e n z o i n a e s t i v a l e (Peck)

Diplodia dulcamaeae *Fckl.* Copake. On dead stems of S o l a n u m d u l c a m a r a (Peck)

Diplodia rhois *Sacc.* Southfield. On dead twigs of R h u s c o p a l l i n a (Peck)

Dothidea baccharidis *Cooke.* Sag Harbor. On dead stems of B a c c h a r i s h a l i m i f o l i a (Peck)

Dothidea sambuci (*Pers.*) *Fr.* Albany. On dead twigs of S a m b u c u s r a c e m o s a (House)

Dothidella junci (*Fr.*) *Sacc.* Albany. On dead and languishing stems of J u n c u s e f f u s u s (House)

Dothiorella peckiana *Sacc.* Salamanca. On dead stems of Viburnum alnifolium (Peck)

Eutypa heteracantha *Sacc.* Cold Spring. On dead branches of Ailanthus glandulosus (Peck)

Eutypa ludibunda *Sacc.* Savannah. On dead twigs of Hicoria glabra (Peck)

Eutypa longirostris *Peck.* Albany. On dead twigs of Ulmus americana (House)

Gibbera vaccinii (*Sow.*) *Fr.* Featherstone lake, Schenectady county, on languishing leaves of Oxycoccus macrocarpus (House)

Gloeosporium crataeginum *Sacc.* Crown Point. On leaves of Crataegus crus-galli.

Gnomonia petiolophila (*Peck*) *Berl. & Vogl.* Albany. On fallen petioles of Acer spicatum (House). Adirondack mountains on same host (Peck)

Godronia cassandrae *Peck.* Albany. On dead twigs of Chamaedaphne calyculata (House)

Haplosporella malorum *Sacc.* Rensselaer. On dead twigs of Pyrus malus (Peck)

Harpographium magnum *Sacc.* Albany. On dead branches of Prunus cuneata (House)

Hendersonia anceps *Sacc.* Hewitt's pond, Adirondack mountains. On dead stems of Spiraea salicifolia (Peck)

Hypoderma tenellum *Sacc.* Bennetts. On dead stems of Thalictrum dioicum (Peck)

Hypoxylum coccineum *Bull.* Menands. On bark of Fagus americana, and Boreas, Adirondack mountains, on Amelanchier canadensis (Peck)

Leptosphaeria doliolum (*Pers.*) *De Not.* Albany. On dead stems of Verbascum thapsus (House). Sprakers. On dead stems of Urtica dioica (Peck)

Leptosphaeria dumetorum *Niessl.* Wading River. On dead stems of Lathyrus maritimus (Peck)

Leptosphaeria houseana *Sacc.* Albany. On dead stems of Thalictrum dioicum (House)

Leptosphaeria hydrophila *Sacc.* Oneida. On leaves of Typha angustifolia (House)

Leptostroma pinastri *Desm.* New Scotland and Karner. On fallen needles of Pinus rigida (Peck)

Leptothyrium alneum (*Lev.*) *Sacc.* Karner. On fallen leaves of Alnus rugosa (Peck)

Leptothyrium periclymeni (*Desm.*) *Sacc.* Kirkville. On leaves of Lonicera oblongifolia (House)

Lophodermium melaleucum (*Fr.*) *DeNot.* Sand Lake. On fallen leaves of Vaccinium corymbosum (Peck)

Lophodermium petiolicola *Fckl.* Bennetts. On fallen petioles of Fraxinus americana (Peck)

Meliola pitya *Sacc.* Caroga. On languishing leaves of Taxus canadensis (Peck)

Microascus americanus *Sacc.* Catskill mountains. On wood of Liriodendron tulipifera (Peck)

Micropeltis pitya *Sacc.* Tupper Lake. On dead or languishing leaves of Abies balsamea (House)

Oospora candidula *Sacc. var.* **carpogena** *Sacc.* Albany. On fruit of Ceanothus americanus (House)

Ophiobolus porpyrogonus (*Tode*) *Sacc.* Menands. On dead stems of Urticastrum divaricatum (Peck)

Ophionectria scolecospora *Bref.* Lake Placid. On dead limbs of Pinus strobus (Peck)

Patellaria (Karschia) patinelloides (*S. & R.*) *Sacc.* Lake Henderson, Adirondack mountains. On bark of Abies balsamea (Peck). This species occurs upon Robinia in Europe.

Phaeangium peckianum *Sacc.* Sand Lake. On bark of Acer saccharum (Peck)

Phoma atomica Albany. *Sacc.*. On bark of Salix nigra (Peck)

Phoma houseana *Sacc.* Featherstone lake, Schenectady county. On dead twigs of Vaccinium corymbosum (House)

Phoma leguminium *West.* Clarksville. On fallen seed pods of Robinia pseudoacacia (Peck)

Phoma pleosporoides *Sacc.* Sand Lake. On dead stems of Impatiens fulva (Peck)

Phoma pulchella (*B. & C.*) *Sacc.* Southfield. On dead twigs of Rhus copallina (Peck)

Phoma samararum *Desm.* West Albany. On fallen samaras of Fraxinus nigra (Peck)

Phoma solidaginis *Cooke var.* longiscula *Sacc.* Rensselaer. On dead stems of Solidago (Peck)

Phomopsis ailanti (*Sacc.*) *Trav.* Cold Spring. On dead stems of Ailanthus glandulosus (Peck). Pycnidial stage of Diaporthe ailanthi.

Phomopsis daturae (*Roll. & Fautr.*) *Sacc.* Albany. On dead stems of Datura stramonium (House)

Phomopsis diachenii *Sacc.* Albany. On dry fruit of Pastinacea sativa (House)

Phomopsis viticola *Sacc.* (Phoma viniferae *Cooke*). Albany. On dead stems of Vitis aestivalis (House)

Phragmidium andersoni *Shear.* Copake. On leaves of Dasiphora fruticosa (Peck)

Phyllosticta crataegi (*Cooke*) *Sacc.* Westport. On living leaves of Crataegus holmesiana (Peck)

Phyllosticta cruenta (*Fr.*) *Kickx.* Oneida. On leaves of Vagnera racemosa (House)

Phyllosticta maculiformis *Sacc.* Indian Lake. On fallen leaves of Alnus rugosa (Peck)

Phyllosticta phomiformis *Sacc.* Oneida. On leaves of Quercus alba (House)

Phyllosticta pirina *Sacc.* Albany. On leaves of Pyrus malus (House)

Phlyctaena verrucarioides *Sacc.* Albany. On dead limbs of Tilia americana (House)

Pleospora vulgaris *Niessl.* Central Bridge. On dead stems of Gerardia quercifolia (Peck)

Propolidium atrovirens (*Fr.*) *Rehm.* Clarksville. On decaying wood of Quercus rubra (Peck)

Pseudovalsa stylospora *E. & E.* North Elba. On bark of Acer spicatum (Peck)

Pyrenopeziza rubi (*Fr.*) *Rehm.* Morehouseville. On dead stems of Rubus strigosus (Peck)

Pyrenopeziza thalictri (*Pk.*) *Sacc.* Sand Lake. On dead stems of Thalictrum purpurascens (Peck)

Rabenhorstia tiliae *Fr.* Albany. On dead branches of Tilia americana (Peck)

Rhabdospora clarkeana *Sacc.* Sand Lake. On dead stems of Aquilegia canadensis (House)

Sclerotium fallax *Sacc.* Spencertown. On leaves of Potentilla canadensis (Peck)

Sclerotium mendax *Sacc.* Karner. On leaves of Solidago altissima (Peck)

Septoria albaniensis *Thum.* Oneida. On leaves of Salix cordata (House)

Septoria breviuscula *Sacc.* Eaton. On dead leaves of Linnaea americana (House)

Septoria coptidis *B. & C.* Sand Lake. On dead leaves of Coptis trifoliata (Peck)

Septoria cornicola *Desm.* Albany. On languishing leaves of Cornus alternifolia (House)

Septoria dalibardae *Peck.* Oneida. On languishing leaves of Dalibarda repens (House)

Septoria francisci *Sacc.* (S. dolichospora *E. & E.*, not Trail) Karner. On leaves of Solidago (Peck)

Septoria increscens *Peck.* Oneida Lake. On languishing leaves of Trientalis americana (House)

Septoria irregularis *Peck.* Oneida. On languishing leaves of Rhus toxicodendron (House)

Septoria lobeliae *Peck, var.* **lobeliae-inflatae** *Sacc.* Albany. On leaves of Lobelia inflata (House)

Septoria ludwigiae *Cooke.* Oneida. On leaves of Ludwigia palustris (House)

Septoria polygalae *Peck & Cooke.* Albany. On dead and languishing leaves of Polygala pauciflora (House)

Septoria ribis *Desm. var.* **ribis-rotundifolii** *Sacc.* Oneida. On leaves of Ribes rotundifolia (House)

Septoria rubi *West. var.* **brevispora** *Sacc.* North Chatham. On leaves of Rubus hispididus, and Schoharie on leaves of Rubus villosus (Peck)

Sphaerella altera *Pass.* Karner. On dead stems of Equisetum hyemale (Peck)

Sphaerella colorata *Peck.* Oneida Lake. On leaves of Kalmia angustifolia (House)

Sphaerella gaultheriae *C. & R.* Albany. On leaves of Gaultheria procumbens (House)

Sphaerella populifolia *Cooke.* North Elba. On fallen leaves of Populus balsamifera (Peck)

Sphaerella populnea *Sacc.* Tupper Lake. On fallen leaves of Populus balsamifera (House)

Sphaerella punctiformis (*Pers.*) *Rob.* Highland Mills. On fallen leaves of Fraxinus americana (Peck)

Sphaerella sarraceniae (*Schw.*) *Sacc.* Sand Lake. On dead leaves of Sarracenia purpurea (Peck)

Sphaerella vacinii *Cooke, var.* **corymbosi** *Sacc.* Spruce pond, Adirondack mountains. On fallen leaves of Vaccinium corymbosum (Peck)

Sphaeronema truncatum *Fr.* Racquette Lake. On wood of Tsuga canadensis (Peck)

Sporocybe azaleae (*Peck*) *Sacc.* Albany. On dead buds and twigs of Azalea viscosa (House)

Sporodesmium opacum *Sacc.* Bolton Landing. On decayed wood of Juglans cinerea (Peck)

Sporodesmium pilulare *Sacc.* Albany. On decorticated wood of Juniperus virginiana (House)

Stemphylium magnusianum *Sacc.* Oneida. On bark of dead branches of Carpinus caroliniana (House)

Tremella nigricans (*Fr.*) *Sacc.* Albany. On dead limbs of Tilia americana (House.) Whitehall. On same host (Peck)

Tympanis pinastri *Tul.* (T. laricina *Fckl.*). Mount Marcy and Hardscrabble pond, Adirondack mountains. On bark of Abies balsamea (Peck)

Valsa abietis *Fr.* Old Forge. On dead bark and branches of Tsuga canadensis (Peck)

Valsa auerswaldi *Nke.* Rensselaer. On dead twigs of Fagus americana (Peck)

Valsa brevis *Peck.* Tupper Lake. On dead branches of Abies balsamea (House)

Venturia compacta *Peck.* Grafton. On languishing leaves of Oxycoccus macrocarpus (Peck)

Venturia pulchella *C. & P.* Sand Lake. On leaves of Chamaedaphne calyculata (Peck)

Vermicularia dematium (*Pers.*) *Fr.* Albany. On fallen petioles of Ailanthus glandulosus (House.) Oneida. On dead stems of Sedum purpureum (House)

Vermicularia saponariae *Allersch.* Rensselaer. On dead stems of Saponaria officinalis. (Peck)

LOCAL FLORA NOTES IV

1 ALBANY COUNTY

Antennaria occidentalis Greene

Indian Ladder, Helderberg mountains. J. B. Rubinger, June 13, 1916. Menands. J. B. Rubinger, May 24, 1916.

Carex oligosperma Michx.

Karner. H. D. House, July 26, 1915, *No. 5948*.

Lotus corniculatus L.

Near Albany. H. D. House, July 9, 1916. Selkirk. C. E. Jones, July 1907.

Viola septentrionalis Greene

Kenwood. J. B. Rubinger, May 10, 1916.

2 COLUMBIA COUNTY

Panicum virgatum L.

Marsh along the east bank of the Hudson river near Stuyvesant. H. D. House, August 5, 1916. A species of moist barrens and salt marshes chiefly southward. Rarely collected this far northward. According to Hitchcock & Chase (Cortr. U. S. Nat. Herb. 15:91. 1910), the only localities for this grass farther north than this are Brattleboro, Vermont, and Toronto, Canada, in the eastern states. Doctor Peck collected it several years ago along the Hudson river above Rensselaer (then known as North Greenbush).

3 FULTON COUNTY

Antennaria petaloidea Fernald

Sandy fields near Northampton. H. D. House, May 28, 1914.

Poa nemoralis Linn.

Woods near Cranberry Creek. H. D. House, May 27, 1914. Determined by A. S. Hitchcock.

4 GENESEE COUNTY

Anticlea elegans (Pursh) Rydb.

Marl bog in Bergen swamp. H. D. House, August 14, 1916.

Fig. 2 Cypripedium candidum Willd., from the open marl bog in Berg n swamp, Genesee co.

Cypripedium candidum Willd.

(Figure 2)

Marl bog in Bergen swamp. H. D. House, June 2, 1916.

Arethusa bulbosa Linn.

Marl bog in Bergen swamp. H. D. House, June 2, 1916.

Comandra umbellata Nutt.

Common on the surface of very wet marl bog in Bergen swamp. H. D. House, June 2, 1916. Not a rare plant, but the habitat is unusual, as the species is usually found in sandy or dry soils.

Myrica caroliniensis Mill.

Around the margins and on the marl bogs in Bergen swamp. H. D. House, June 2, and August 14, 1916.

A frequent species along the Atlantic coast, but known inland only in the swamps of Bergen, Junius, Parma and Caledonia, all in the western part of the State and previously reported as Myrica cerifera, a related species of the south.

Parnassia caroliniana Michx.

Common in Bergen swamp. H. D. House, June 2, 1916. When growing on the surface of the marl bogs it is often dwarfed.

Viola nephrophylla Greene

Marl and Sphagnum bogs, Bergen swamp. H. D. House, June 2, 1916.

Viola septentrionalis Greene

Damp shaded places in Bergen swamp. H. D. House, June 2, 1916.

Scirpus caespitosus Linn.

Marl bogs in Bergen swamp. H. D. House, June 2, 1916. Also reported from here by G. W. Clinton.

Trianthera glutinosa (Michx.) Baker

Marl and Sphagnum bogs of Bergen swamp. H. D. House, August 14, 1916.

Solidago uniligulata (DC.) Porter

Marl and Sphagnum bogs in Bergen swamp. H. D. House, August 14, 1916.

Solidago houghtonii Torr. & Gray

Wet surface of marl bogs in Bergen swamp. H. D. House, August 14, 1916.

Solidago ohioensis Riddell

Swampy places, edge of Bergen swamp. H. D. House, August 14, 1916.

Oryzopsis racemosa (Sm.) Ricker

Dry banks, " The Gulf." M. S. Baxter, August 1, 1914.

Sorghastrum nutans (L.) Nash

Open places in Bergen swamp. H. D. House, August 14, 1916.

5 MADISON COUNTY

The following species of Carex have been collected during the past three seasons in Madison county:

Near Oneida

Carex cristata *Schw.*
" crawfordii *Fernald*
" pallescens *Linn.*
Carex scirpoides *Schk.*
" rosea *Schk.*
" aurea *Nutt.*

Fiddler's green, Pecksport

Carex communis *Bailey*
" granularis *Muhl.*
" palescens *Linn.*
" laxiflora *Lam.*
" cephaloidea *Dewey*
" stricta *Lam.*
" grisea *Wahl.*
Carex lacustris *Willd.*
" arctata *Boott*
" bromoides *Schk*
" rosea *Schk.*
" teretiuscula *Good.*
" aurea *Nutt.*
" magellanica *Lam.*

According to Doctor Holm (in lit.), Lamarck in his diagnosis of Carex magellanica meant that *all* of the spikes contain some staminate flowers, a character constant in his Carex magellanica, as well as in the European plant, the one named Carex irrigua by Wahlenburg and finally also in our American plant named Carex paupercula by L. C. Richardson. Lamarck's name should be retained for these forms, and failure to do so in recent works is apparently due to a misunderstanding of Lamarck's diagnosis.

Doctor Holm further remarks that regarding Carex teretuiscula Good., the species designated by Schkuhr. as Carex diandra is according to the author of it a mixture of Carex teretuiscula Good., Carex paradoxa and Carex

Fig. 3 Polemonium vanbruntiae Britton, from near Peterboro, Madison co., growing in open marsh with sedges

paniculata, and hence the retention of Gooding's name seems preferable to that of Carexdiandra.

Polemonium vanbruntiae Britton

(Figure 3)

Marshy ground near Peterboro. H. D. House, June 29, 1916, and near Warren, Herkimer co. These constitute new localities for this rare species which in this State is confined chiefly to the western and southern Catskill region. The state herbarium contains the following collections:

Schoharie county (locality not indicated). Miss Rhoda Waterbury. Charlotteville swamp. C. H. Peck.

Chenango county. McDonough. F. V. Coville.

Ulster county. Sand Pond. A. P. Van Gievon. Balsam Lake. Agnes M. Blodgett.

Delaware county. Balsam mountain. Agnes M. Blodgett.

6 MONROE COUNTY

Camelina microcarpa Andrz.

Irondequoit. H. D. House, June 1, 1916.

Antennaria ambigens (Greene) Fernald

Sandy fields near Irondequoit. Staminate and pistillate plants. H. D. House, June 1, 1916.

Amelanchier stolonifera Wiegand

Wet marshes along with Dasiphora fruticosa. Mendon. M. S. Baxter. May 8 (flowers) and June 20 (immature fruit), 1916.

Crepis capillaris (L.) Wallr.

In lawns. Rochester. M. S. Baxter, August 10, 1916.

Cynanchium vincetoxicum (L.) Pers.

Pinnacle hills, Rochester. Douglas M. White, June 4, 1916. A native of the old world, recorded as escaped from cultivation in southern Ontario. It differs from C. nigrum (which possesses dark purple flowers with the segments pubescent within) by having greenish white flowers with glabrous corolla lobes. It was collected also near Rochester by Dr C. H. Peck and reported in 1913 under the name of C. nigrum. Doctor Peck's specimens were in fruit and hence easily mistaken for that species.

Carex tuckermanni Dewey

Penfield. M. S. Baxter, July 1, 1914.

Cyperus engelmanni Steud.

Pittsford. M. S. Baxter. September 1, 1914.

Agrostis perennans (Walt.) Tuckerm.

On wet logs, Genesee river. M. S. Baxter, September 10, 1914.

Festuca elatior arundinacea Celak

Wet meadows near Rochester. M. S. Baxter, July 26, 1914.

Centaurea maculosa Lam.

Sandy fields, Brighton. M. S. Baxter, August 4, 1914.

Sagittaria cuneata Sheldon

Wet shores, Irondequoit bay. M. S. Baxter, August 10, 1916.

7 NASSAU COUNTY

Antennaria ambigens (Greene) Fernald

Sandy field near Merrick. H. D. House, June 16, 1916. These specimens possess unusually broad leaves, green but persistently and conspicuously woolly above, and without doubt are similar if not identical with Antennaria calophylla Greene as described in Britton's Manual. Except for the relatively broader leaves they are the same as recent collections of A. ambigens made in Albany and Monroe counties.

Teucrium littorale Bicknell

Brackish marshes near Oceanside and Long Beach. H. D. House, July 27, 1916. In Rhodora 10:84, 1908, Mr Fernald reduces this to a variety of T. canadense. As a matter of fact the characters of T. littorale, namely, leaves tapering at the base and the villous calyx, make it more closely related to T. boreale and T. occidentalis. Specimens from Orient Point (coll. Roy Latham) possess densely villous calyces and densely soft pubescent or velvety leaves. Specimens from Long Beach vary from canescent calyces to canescent with numerous long villous hairs. Its general appearance, habitat and distinct characters seem to indicate it as well marked in a group of very closely related species.

Kneiffia alleni (Britt.) Small

In sand near Long Beach. H. D. House, July 31, 1916.

Viola brittoniana x fimbriatula Dowell

Hempstead meadows. H. D. House, June 19, 1916.

Viola affinis x brittoniana Dowell

Hempstead meadows. H. D. House, May 18, 1916.

Lycopus europaeus Linn.

Near Hempstead. H. D. House, September 8, 1916. This resembles rather closely L. americanus, but the stems are densely pubescent, and it appears to match European specimens of L. europaeus.

Panicum virgatum cubense Griseb.

Along the edge of salt marshes near Oceanside. H. D. House, July 31, 1916. Also collected by Doctor Peck at Riverhead, Suffolk county, several years ago. It has been variously designated as Panicum virgatum obtusum Wood, and Panicum virgatum breviramosum Small.

8 ONONDAGA COUNTY

Amelanchier humilis Wiegand

A very distinct shrubby species growing on the limestone ledges of central New York. Labrador pond near Apullia, on the limestone ledges east of the pond. H. D. House, August 13, 1916, in fruit. One to three feet high, irregular in growth, usually spreading and deeply rooted in the crevices of the rock. Leaves elliptical oblong to nearly orbicular, sharply serrate with curved teeth, except at the base. Fruit dark blue without bloom.

Carex lasiocarpa Schk.

"Old Fly" near Pompey. H. D. House, June 28, 1916. Also collected near Baldwinsville, June 27, 1916 and at Carpenter's pond, June 29, 1915.

Carex buxbaumii Wahl.

"Old Fly" near Pompey. H. D. House, June 28, 1916. Growing with Carex aquatilis Wahl.

Carex deweyana Schw.

Open swampy ground around Carpenter's pond near Fabius. H. D. House, June 29, 1915.

Moneses uniflora (L.) A. Gray

Under hemlocks and cedar. Carpenter's pond. H. D. House, June 29, 1915. The species was very abundant there in 1915, but a year later, on June 28, 1916, it could not be found. However the season of 1916 was very wet and the woods where the plant had formerly been found was largely under water so that its failure to flower in 1916 was not surprising. Since such conditions occur frequently it probably does not result in the extermination of the species.

9 ONTARIO COUNTY

Antennaria occidentalis Greene

Near Fishers. H. D. House and M. S. Baxter, June 3, 1916.

Eupatorium purpureum var. **foliosum** Fernald

Swamp near Fishers. M. S. Baxter, September 10, 1916.

Paspalum muhlenbergii Nash

Fishers. M. S. Baxter, September 15, 1914. Also collected by Mr Baxter at Perriton, Monroe county, September 15, 1910.

Viola perpensa Greene

Leaflets 1:184. 1906

Related to Viola palmata L. Earliest leaves deeply and palmately cut into 5 to 7 more or less blunt lobes. Blades of the summer leaves primarily 3-lobed, the middle lobe 3-cleft, the lateral lobes 3 to 5-cleft into lanceolate, acute to long-acuminate lobes which stand obliquely forward from the middle lobe. Entire arrearance of the plant in late summer taller and more slender than Viola palmata. Early foliage glabrous to sparingly pubescent; later leaves 2 to 4 inches long, nearly as broad, pubescent especially on the veins beneath and on the slender petioles. Flowers 2 to 3.5 cm broad, on pedicels about equaling the foliage at flowering time. Sepals ovate-lanceolate, green, hyaline margined and glabrous, 3-nerved, 6 to 8 mm long, 2.5 mm wide, the basal auricle ovate and blunt, about 1 mm long; petals dark blue to violet, the lateral ones oblong, broadly rounded at their tips as is the spur petal which is

scarcely broadened at the end and beardless, the lateral petals with small tufts of white hairs at the base; spur about 4 mm long, full and rounded. Cleistogenes on short horizontal or deflexed pedicels; their pods oblong, 6 to 8 mm long, seeds ovate, drab-colored.

Fishers, Ontario county. On shaded hillsides and moist woodlands which become dry in late summer. H. D. House and M. S. Baxter, June 3, 1916. Same locality. M. S. Baxter, September 10, 1916.

Hybridizes freely with Viola fimbriatula J. E. Smith, producing luxuriant clumps of sterile plants with elongated leaves in which the middle segment is greatly elongated and 3-lobed above the middle, the lateral segments greatly reduced and sometimes not divided, giving a pinnate appearance to the entire leaf-blade. This may be designated as **Viola fimbriatulax perpensa** hyb. nov.

Viola perpensa is regarded by Mr Brainerd (Torrey Club Bul. 37:583. 1910) as a "form or geographical race" of Viola palmata. It ranges from central New York westward through the Ontario lowlands and the Great Lakes region to Minnesota. In the first edition of Britton and Brown's Illustrated Flora it is referred to as a "form with the lateral leaf-lobes linear, perhaps distinct." In Britton's Manual it is included in the description of Viola bernardi Greene.

10 OSWEGO COUNTY

Among the species of Carex to be recorded for Oswego county are the following:

Carex albicans *Willd.* Lewis' bluff near Oswego (Sheldon)
" deflexa *Hornm.* Lewis' bluff near Oswego (Sheldon)
" pallescens *L.* Lewis' bluff near Oswego (Sheldon)
" communis *Bailey.* Lewis' bluff near Oswego (Sheldon)
" pedunculata *Muhl.* Lewis' bluff near Oswego (Sheldon)
" albursina *Sheldon.* Lewis' bluff near Oswego (Sheldon)
" projecta *Mackenzie.* Lake shore near Oswego (House)
" hystricina *Muhl.* Swamp near Oswego (Sheldon)
" bromoides *Schk.* Mud lake near Hannibal (House)
" stellulate *Good. var.* cephalantha (*Bailey*) *Fernald.* Mud lake near Hannibal (House)
" scabrata *Schw.* Panther lake near Constantia (House)

11 RENSSELAER COUNTY

Carex typhinoides Schw.

Sand Lake. H. D. House. *No. 5179.* July 4, 1913.

Lycopus membranaceus Bicknell

Bald mountain near Lansingburg. H. D. House and Joseph Rubinger, August 25, 1916. Also collected at Green Island by Doctor Peck. Distinguished from other species of Lycopus by its large, pale green, long-petioled leaves of thin, membranacous texture, small clusters of flowers, small corollas and stems conspicuously tuberiferous at the base, usually with numerous, long and filiform, non-tuberous stolons, arising from the main stem above the tubers and often one to two feet long.

12 SUFFOLK COUNTY

Viola emarginata LeConte

Babylon. H. D. House, May 23, 1916. Manorville, June 21, 1916.

Viola hirsutula Brainerd

Babylon. H. D. House, May 23, 1916.

The following hybrid violets were also collected:

Viola cucullata x fimbriatula. Manorville
" fimbriatula x hirsutula. Babylon
" affinis x hirsutula. Babylon
" hirsutula x palmata. Babylon
" emarginata x sagittata. Babylon

Panicum pseudopubescens Nash

Sandy woods of oak and pine, near Manorville. H. D. House, June 20, 1916.

13 WAYNE COUNTY

On August 12, 1916 a visit was made to the southern end of Sodus bay for the purpose of collecting the American Lotus in flower (Nelumbo lutea (Willd.) Pers.). The date was a little early for only a few plants were in flower, but they alone well repaid for the trouble encountered in reaching the spot. The Lotus here grows in water two to eight feet in depth just outside the zone of Typha and Scirpus along the shore. (Figure 4.) The flowers are pale yellow and very fragrant, the large, orbicular, peltate leaves are usually 1 to 2 feet above the water on stout petioles, while the flowers stand from 2 to 3 feet out of the water. The large white water-lily (Castalia tuberosa (Paine) Greene) is also abundant here.

Fig. 4 View of the colony of American Lotus (*Nelumbo lutea*) at Resort on the head of Sodus bay. The Lotus grows in water two to six feet deep in front of a dense marginal growth of Scirpus, Typha and Juncus along the shore in shallower water. *Nymphaea tuberosa* and several species of Potamegoton are also abundant here

THE VEGETATION OF THE EASTERN END OF ONEIDA LAKE

Introduction. The geographical location of New York State, with the Atlantic ocean upon one side and the Great Lakes on the other, gives it a unique position in regard to certain factors which influence vegetation — relative humidity, rainfall and snowfall. The general character of the climate of New York is conducive to forest growth, in contrast to conditions in the middle western states, while the extremes of temperature are considerably modified by the ocean and the inland lakes.

In the higher Adirondacks, the growing season, as measured between the last spring frost and the first fall frost, is between 90 and 120 days, while the growing season at Oneida lake is about 145 days, and on Lake Ontario near Oswego, 170 days, being exceeded in New York only by portions of Long Island and Staten Island with a growing season of 170 to 200 days.

The marshes, sandy plains and shores of the eastern end of Oneida lake have been for many years a most interesting field of study for botanists. The literature of botany in New York contains numerous references to this region and to certain species found growing there, but hitherto no attempt has been made to discuss fully the vegetation of this region.

Among the botanists who have collected here are Dr John Torrey, Dr Asa Gray, Peter Kneiskern, Dr George Vasey, John Paine, jr, Dr J. V. Haberer, William R. Maxon, Dr C. H. Peck and many others. The herbariums of many institutions are rich in specimens collected here by the above-named botanists, as well as by other collectors.

A casual review of the vegetation of this region indicates an unusual number of species of sedges, grasses and aquatic plants. There also appears a certain element which is more suggestive of the vegetation of the northern coastal region than of the typical Canadian-Transition flora which chiefly surrounds this region. The general prevalence of sandy soils is doubtless responsible in large measure for this, but on the other hand, many species typical of the northern coastal plain and other sandy regions in the north, are conspicuous by their absence.

What now remains of the original forest condition which once prevailed here is very slight indeed, but there is sufficient evidence to establish the fact that the white pine was one of the predominant trees of the primeval forest on these sandy lowlands. Lumbering

and subsequent fires, the latter of frequent recurrence on some areas, has resulted in a more or less complete change of vegetation and in the production of conditions which has favored the spread of sand-loving species of herbs and shrubs. (Figure 5.)

Geology. The only portion of geological history which is of concern here is the Quaternary Period, including the great Ice Age and the subsequent changes in drainage which have taken place in central New York, and especially of Oneida lake which lies in a depression of the southeastern lobe of the Postglacial Lake Iroquois, which discharged its waters to the east through the Mohawk valley. During the retreat of the ice sheet in this region, the St Lawrence valley was still buried under the ice.

Much later the ice sheet retreated sufficiently to allow the discharge of the water along the northern base of the Adirondacks and into the Champlain and Hudson valleys and finally retreated far enough to free the St Lawrence valley and lower the surface of Lake Iroquois so that Oneida lake became isolated from the main body of Postglacial waters, and its drainage was turned from the Mohawk to the Oswego river. Higher levels of Oneida lake are plainly marked by ridges of sand east of the present western shore line which are similar to the low ridge of sand now existing within the fringe of vegetation (figure 6) along the shore, and caused by the action of high water and strong westerly winds.

Climatic influences. The influence of the waters and low elevations of the Great Lakes region serves to produce a distinct climatic province with longer growing season than any other part of the State except the lower Hudson valley and coastal islands. It is a well-known fact that large bodies of water absorb more heat, hold more heat, are warmed to greater depths and absorb and radiate heat more slowly than land areas. In addition to this, probably half of the insolation on water areas is used in evaporating water, and since the prevailing winds of the Ontario lowlands are westerly, the total effect of these conditions is to make cooler summers, milder winters, to prolong the fall season and to retard spring as well as to check to some extent sudden changes in temperature.

These climatic influences are reflected in the character of the vegetation of the Ontario lowlands, where the prevailing forest trees are oak, hickory, chestnut, tulip-tree, elm, basswood, ash, black gum and sassafras, while of infrequent occurrence except in bogs are spruce, tamarack, balsam and white cedar.

This apparent Austral influence is reflected in the character of the forests of the Ontario lowlands as far eastward as the lowlands

Fig. 5 View looking south along a road through the sandy plains — a region formerly covered with forest of pitch pine, oaks and white pine. Only the pitch pine and some of the oaks are left. Repeated fires have changed the character of the soil which now supports a luxuriant growth of Epilobium, Betula populifolia, Aronia, Vaccinium, Pteris aquilina, Populus tremuloides, Rubus villosus, etc.

Fig. 6 Eastern shore of Oneida lake, south of Sylvan Beach, showing formation of small dunes in the margin of the forest (Pinus rigida, Pinus strobus, Quercus alba, Quercus rubra) and clumps of Salix petiolaris in the foreground

Fig. 7 Sand plain forest east of Sylvan Beach composed chiefly of pitchpine, Quercus rubra, Q. alba. The lower vegetation in open places consists chiefly of Pteris aquilina, Dryopteris noveboracensis, Dennstaedia punctiticuloba, Vaccinium pennsylvanicum, Polycodium staminium, etc.

of Onondaga and Madison counties, and is even apparent at the east end of Oneida lake where the tulip tree, black gum, oaks, sassafras and elm are abundant, but where soil conditions have excluded the chestnut in favor of white pine, hemlock, pitch-pine and birch.

The moderating influence of Oneida lake upon the climate of the surrounding land is almost inappreciable because of its shallowness. Covering an area of about 100 square miles the lake is but 20 to 55 feet deep, the greatest depth, near Cleveland, being about 55 feet.

Life zones. In order to make clear the position of the Ontario lowlands and the regions to the northeast and to the immediate south, it seems advisable to introduce at this point an outline of the life zones as defined by Doctor Merriam (Bulletin 10, U. S. Geol. Survey, 1898).

1 Boreal region
- *a* Arctic-Apline zone
- *b* Hudsonian zone. Limited in the eastern United States to the highest mountains of New England to western North Carolina
- *c* Canadian zone. The zone of red spruce, balsam fir, paper birch and mountain ash. In New York confined to the Adirondack region and the higher points of the Catskill mountains

2 Austral region
- *d* Transition zone, the eastern humid portion of which is called the Alleghanian zone. It is the region of oaks, hickories, chestnut, with mixtures of birches, beech, hemlock, and sugar maple, which are not lacking in the Canadian zone
- *e* Upper Austral zone, the eastern humid portion of which is called the Carolinian zone. It is the zone of the tulip tree, hackberry, sweet gum, redbud, persimmon and black gum. In New York extending up the lower Hudson valley and including Long Island and Staten Island
- *f* Lower Austral zone (Austroriparian area)

3 Tropical region
- *g* Tropical zone

It will be seen from this outline that all these zones, excepting the first and the last two, are represented in New York State.

Forests. The region around the eastern end of Oneida lake represents in the character of its arborescent vegetation a close relationship to the Alleghanian-Transition zone. Upon the sandy areas (figure 7) which are not covered by swamp or marsh vegetation the principal trees are:

White pine	Pinus strobus *L.* (represented chiefly by stumps and seedlings.
Hemlock	Tsuga canadensis (*L.*) *Carr.*
Pitch pine	Pinus rigida *Mill.*
White oak	Quercus alba *L.*

Red oak	Quercus rubra *L.*
White birch	Betula populifolia *Marsh.*
Yellow birch	" lutea *Michx. f.*
Witch-hazel	Hamamelis virginiana *L.*
Black oak	Quercus velutina *Lam.*
Wild black cherry	Prunus serotina *Ehrh.*
Juneberry	Amelanchier canadensis (*L.*) *Medic.*
Sassafras	Sassafras sassafras (*L.*) *Karst.*
Bird cherry	Prunus pennsylvanica *L. f.*

In low wet situations (swamp-forest) the principal trees are:

Red maple	Acer rubrum *L.*
Yellow birch	Betula lutea *Michx. f.*
Tupelo or black gum	Nyssa sylvatica *Marsh.*
Elm	Ulmus americana *L.*
Silver maple	Acer saccharinum *L.*
Basswood	Tilia americana *L.*
Swamp hickory	Hicoria cordiformis (*Wang.*) *Britt.*
Swamp white oak	Quercus bicolor *Willd.*
Striped maple	Acer pennsylvanicum *L.*
Red ash	Fraxinus pennsylvanica *Marsh.*
Tulip-tree	Liriodendron tulipifera *L.*
Black ash	Fraxinus nigra *Marsh.*
Cottonwood	Populus deltoides *Marsh.*

The presence here of certain trees like the tulip-tree, the oaks, sassafras, black gum, cottonwood, and chestnut (north of the lake, but not on the low sandy soils about Sylvan Beach), while they do not form a conspicuous element of the forest, excepting the oaks, would seem to indicate that the influence of the climate of the Great Lakes region is felt to some extent in this eastward indentation of the Ontario-Iroquois lowlands.

There is not lacking, however, a good representation of shrubs and herbs very characteristic of the Canadian-Transition zone, the most noteworthy being the following:

Bush honeysuckle	Diervilla diervilla (*L.*) *MacM.*
True wood-sorrel	Oxalis acetosella *L.*
Partridge-berry	Mitchella repens *L.*
Wild sarsaparilla	Aralia nudicaulis *L.*
Gold-thread	Coptis trifolia (*L.*) *Salisb.*
Yellow clintonia	Clintonia borealis (*Ait.*) *Raf.*
Two-leaved Soloman's seal	Unifolium canadensis (*Desf.*) *Greene*
Bunch-berry	Cornus canadensis *L.*
Hobble-bush	Viburnum alnifolium *Marsh.*
Dalibarda	Dalibarda repens *L.*
Canada violet	Viola canadensis *L.*

It is interesting to note that for the most part these species of the Canadian-Transition zone are inhabitants here of dense woodlands, while the large element of Austral shrubs and herbs is mainly

Fig. 8 The broad sandy beach near the mouth of Fish creek showing the encroaching vegetation of Scirpus americanus, Juncus (several species), Salix petiolaris, various grasses, followed by Betula lutea, Acer rubrum, Populus, etc. The advance vegetation upon the sand consists of such small species as Gnaphalium uliginosum, Bidens cernua, Scirpus debilis, Eleocharis acicularis, E. diandra, Hemicarpa micrantha, Polygonum buxiforme, Eragrostis hypnoides, Agrostis maritima, Fimbristylis geminata, Juncus bufonius, etc.

Fig. 9 Eastern shore of Oneida lake, north of Sylvan Beach. The forest is bordered by a zone of willows, which maintains a constant struggle with the sand, wind and waves in summer time, and ice and high water in winter time

in open places — low, sandy plains and the depressions in the sandy plains — open marshes, swamps and shores.

With an almost pure sandy soil, and in most portions of the sandy plains with the water level often very close to the surface, the normal changes in soil temperature are considerably modified, the soil losing less heat at night by radiation because of the closeness of the water level to the surface. This becomes an important factor in the ecology of the vegetation, especially in early spring and late fall, retarding spring vegetation, modifying the extremes of temperature between day and night in summer and retarding the freezing of the soil in late fall, conditions which in connection with the sandy character of the soil favors the development of Austral species of shrubs and herbs to even a greater extent than any modifying influence of the Great Lakes which may extend this far eastward on the Ontario lowlands.

This sandy region affords, therefore, a meeting-ground of southern and northern species, with conditions favoring the southern species in the open and the northern species on the more densely wooded areas.

Austral elements of the vegetation. The broad, sandy beach (figures 8 and 9) along the eastern shore of Oneida lake, together with the sandy plains, depressions, open marshes, and sandy fields, in which the water level is often close to the surface and which frequently lacks well-defined surface drainage, together with a climate modified to some extent by the prevailing winds from the Great Lakes, is favorable to the development of a large Austral element in the vegetation, as indicated in the following list of species which are largely absent from the Transition flora of the territory to the south, east and northeast. Some botanists may explain the presence of certain of these species as due to ecological conditions similar to those prevailing in certain sandy regions of the northern coastal plain, rather than to any marked Austral climatic conditions.

The mere age of a geologic formation is of little consequence in determining the character of plant growth. The important factor is the lithologic character, mechanical and chemical, irrespective of age. Also important is the texture or size of grain of the resulting soils, determining the rate at which plant foods pass into solution, and the structural features helping or hindering drainage.

A sandy soil, whether a recent dune or one derived from the disintegration of Triassic or Paleozoic sandstones, is the home of similar sand-loving plants where moisture conditions are the same, however much the areas may differ in altitude within given limits, or in latitude within certain limits and modifications.

Similarly a heavy soil, whether glacial till or cretaceous clays (both abundant in central New York), might be equally available as a home for species which require such a mechanical condition for their proper growth. Likewise trees requiring a merely rocky soil are largely indifferent as to whether the rock is Eozoic granite or Mesozoic trap.

These principles of soil texture as a determining factor in plant distribution within regions of the same general altitude and climatic conditions are responsible very largely for the characteristic differences between the flora of the sandy plains east of Oneida lake and the clay and loamy soils of the surrounding uplands, and explain at the same time the ease with which the species of the northern coastal plain have invaded this territory.

On hilly clay soil near Tallahassee, Florida, many northern plants occur in a region chiefly sandy and covered by species of the Carolinian flora. This to a certain extent is the reverse of the conditions which exist at the eastern end of Oneida lake.

Further, if we are to consider the various elements of our flora as having migrated northward after the retreat of the ice sheet of the Glacial epoch, it is apparent that the first advance forward of any element of the flora at any time will follow the line of least resistance, which means favorable soil conditions rather than unfavorable conditions where the climatic influences are otherwise identical. The sandy soils of the eastern end of Oneida lake are of alluvial origin (although geologically recent), and hence better adapted to the growth of the Austral species of the northern coastal plain than are gravelly drift, clays and cold humus of the northern Alleghanian plateau in New York State.

With this in mind, the element of Austral vegetation of the region east of Oneida lake as shown in the following list of species becomes of great importance to the student of plant ecology and plant distribution.

Dodge's shield fern	Dryopteris simulata *Davenp.*
Virginia chain fern	Anchistia virginica (*L.*) *Presl.*
Carolina azolla	Azolla caroliniana *Willd.*
Shore horsetail	Equisetum littorale *Kuhlewein*
Ground-pine	Lycopodium tristachyum *Pursh*
Awned cyperus	Cyperus inflexus *Muhl.*
Slender cyperus	" filiculmis *Vahl.*
Spreading spike-rush	Eleocharis diandra *C. Wright*
Low fimbristylis	Fimbristylis geminata (*Nees*) *Kunt*
Common hemicarpha	Hemicarpha micrantha (*Vahl*) *Britt.*
Long sedge	Carex folliculata *L.*
Whip-grass	Scleria triglomerata *Michx.*
Lindheimer's panic-grass	Panicum lindheimeri *Nash*

Red-top panic-grass	Panicum agrostoides *Spreng.*
Ashe's panicum	" ashei *Pearson*
Low stiff panic-grass	" addisonii *Nash*
American panic-grass	" columbianum *Scribn.*
Hemlock panic-grass	" tsugetorum *Nash*
Tennessee panic-grass	" tennesseense *Ashe*
Shore bent-grass	Agrostis maritima *Lam.*
Beard grass	Andropogon furcatus *Muhl.*
Yellow-fringed orchis	Blephariglottis ciliaris (*L.*) *Rydb.*
Lizard's-tail	Saururus cernuus *L.*
Cottonwood	Populus deltoides *Marsh.*
Sweet fern	Comptonia peregrina (*L.*) *Coulter*
Slender ladies'-tresses	Ibidium gracilis (*Bigel.*) *House*
Hispid cat brier	Smilax hispida *Muhl.*
Wild orange-red lily	Lilium philadelphicum *L.*
Jointed knotweed	Polygonella articulata (*L.*) *Meissn.*
Shore knotweed	Polygonum buxiforme *Small*
Bastard toadflax	Comandra umbellata (*L.*) *Nutt.*
Long-fruited anemone	Anemone cylindrica *A. Gray*
Wind-flower	" quinquefolia *L.*
Rue anemone	Syndesmon thalictroides (*L.*) *Hoffm.*
Pokeweed	Phytolacca americana *L.*
Sassafras	Sassafras sassafras (*L.*) *Karst.*
Virginia spring beauty	Claytonia virginica *L.*
Willow-leaved meadowsweet	Spiraea alba *Dukoi*
Dewberry	Rubus villosus *Ait.*
Low June-berry	Amelanchier intermedia *Spach*
Lupine	Lupinus perennis *L.*
Beach pea	Lathyrus maritimus (*L.*) *Bigel.*
Round-leaved tick trefoil	Meibomia michauxii *Vail*
Hairy bush-clover	Lespedeza hirta (*L.*) *Hornem.*
White baneberry	Actaea alba (*L.*) *Mill.*
Milkwort	Polygala viridescens *L.*
Hairy-leaved winterberry	Ilex verticillata *var.* padifolia (*Willd.*) *T. & G.*
Frostweed	Helianthemum canadense (*L.*) *Michx.*
Pinweed	Lechea intermedia *Leggett*
Ovate-leaved violet	Viola fimbriatula *J. E. Smith*
Pine-weed	Sarothra gentianoides *L.*
Meadow beauty	Rhexia virginica *L.*
Tulip-tree	Liriodendron tulipifera *L.*
Sycamore	Platanus occidentalis *L.*
Panicled dogwood	Cornus paniculata *L'Her.*
Black gum	Nyssa sylvatica *Marsh.*
Pinkster flower	Azalea nudiflora *L.*
Male-berry	Lyonia ligustrina (*L.*) *DC.*
Squaw huckleberry	Polycodium stamineum (*L.*) *Greene*
Coast-region cranberry	Oxycoccus macrocarpus (*Ait.*) *Pursh*
Blue curls	Trichostema dichotomum *L.*
Yellow hedge-hyssop	Gratiola aurea *Muhl.*

Rough hedge-nettle	Stachys aspera *Michx.*
Red ash	Fraxinus pennsylvanica *Marsh.*
Slender agalinis	Agalinis tenuifolia (*Vahl*) *Britt.*
Slender lobelia	Lobelia spicata *Lam.*
Venus's looking-glass	Specularia perfoliata (*L.*) *A. DC.*
White-topped aster	Sericocarpus asteroides (*L.*) *B. S. P.*
Linear-leaved aster	Ionactis linearifolius (*L.*) *Greene*
Climbing hemp-weed	Mikania scandens (*L.*) *Willd.*
Flat-topped goldenrod	Euthamia graminifolia (*L.*) *Nutt.*
Large-leaved antennaria	Antennaria fallax *Greene*

Perhaps not less marked is the absence of a large number of Austral species, typical of the sandy plains between Schenectady and Albany, and almost as far north as Oneida lake, such as Quercus ilicifolia, Q. prinoides, Ceanothus americanus, and several others. In the case of the Albany-Schenectady plains, there is a more direct connection with the coastal plain by way of the Hudson valley and the sand-loving Austral species have taken a firmer and earlier possession of that region.

Plant formation. A consideration of the plant formations of the region east of Oneida lake is necessarily influenced by the fact that extensive lumbering operations in the past and repeated fires have produced conditions or changes in the vegetation and caused interruptions in the normal succession of floras that are not easy to collate with the primeval conditions. Seemingly, the only plant formations remaining unaffected are those of the shore and the hardwood swamps.

Shore Vegetation

(Figures 8 and 9)

The broad, sandy shore of the eastern end of Oneida lake is the home of numerous, shore-loving species, the most noteworthy of which are the following:

Agrostis maritima *Lam.*
Argentina anserina (*L.*) *Rydb.*
Bidens cernua *L.*
" frondosa *L.*
Cyperus inflexus *Muhl.*
" rivularis *Kunth*
" esculentus *L.*
" speciosus *Vahl*
Echinochloa frumentacea (*Roxb.*) *Link.*
Eleocharis acicularis (*L.*) *R. & S.*
" diandra *C. Wright*
" intermedia (*Muhl.*) *Schultes*
" palustris (*L.*) *R. & S.*
Eragrostis hypnoides (*Lam.*) *B. S. P.*
Fimbristylis geminata (*Nees*) *Kunth*
Gnaphalium uliginosum *L.*
Hemicarpa micrantha (*Vahl*) *Pax.*
Isnardia palustris *L.*
Juncus bufonius *L.*
" acuminatus *Michx.*
Lathyrus maritimus (*L.*) *Bigel.*
Mollugo verticillata *L.*
Polygonum buxiforme *Small*
Ranunculus reptans *L.*
Salix humilis *Marsh.*
Scirpus americanus *Vahl*
" debilis *Pursh*
Sporobolus uniflorus (*Michx.*) *Scribn. & Merr.*

Fig. 10 View along Fish creek near Sylvan Beach. Shore thickets of Salix nigra, Acer rubrum, Alnus incana etc. Shallow water vegetation of Sparganium, Pon tederia, Sagittaria, Alisma, Juncus, Nymphaea, Scirpus, Typha, etc.

Lake Vegetation

The quieter waters of some of the bays, especially when protected from the prevailing winds by a wooded point, are rich in aquatic species. The deeper waters containing:

Castalia tuberosa (*Paine*) *Greene*
Nymphaea microphylla *Pers.*
" variegata (*Engelm.*) *G. S. Miller*
Potamogeton pectinatus *L.*
Potamogeton angustifolius *B. & P.*
" lucens *L.*
" perfoliatus *L.*
Naias flexilis (*Willd.*) *R. & S.*
Nymphoides lacunosum (*Vent.*) *Kuntze*

Near the shores or in shallower water occurs extensive stretches of "swale-grass," as it is locally known, consisting of Scirpus americanus Pers., Spartina michauxiana Hitchc., Scirpus validus Vahl, Juncus effusus L., Eleocharis palustris vigens Bailey, Typha latifolia L., with smaller and varying quantities of the following species: Scirpus fluviatilis (Torr.) A. Gray, Pontederia cordata L., Persicaria amphibia (L.) S. F. Gray, Dianthera americana L., Mariscus mariscoides (L.) Kuntze, Alisma subcordatum Raf., Persicaria muhlenbergii (S. Wats.) Small, Saururus cernuus L., Calamagrostis canadensis (Michx.) Beauv., Cinna arundinacea L., and various other species.

Stream Vegetation

The quieter and deeper waters of the streams (figure 10) and their shallow sandy or muddy shores contain an unusually large aquatic vegetation, among which the following are the most conspicuous by their abundance:

Nymphaea variegata (*Engelm.*) *G. S. Miller*
" rubrodisca (*Morong*) *Greene*
Castalia odorata (*Dryand.*) *Woodv. & Wood*
Myriophyllum verticillatum *L.*
Lemna minor *L.*
" trisulca *L.*
Vallisneria spiralis *L.*
Philotria canadensis (*Michx.*) *Britton*
Persicaria amphibia (*L.*) *S. F. Gray*
Zannichellia palustris *L.*
Azolla caroliniana *Willd.*
Potamogeton natans *L.*
" epihydrus *Raf.*
" angustifolius *B. & P.*
" heterophyllus *Schreb.*
" perfoliatus *L.*
" diversifolius *Raf.*
" praelongus *Wulf.*
" pusillus *L.*
Neobeckia aquatica (*Eaton*) *Greene*

Marsh Meadow Vegetation

Marshy meadows in which the dominant species are Carices and grasses are rather abundant in the lowlands east of Oneida lake.

In most of them there is a tendency for the marsh to develop into a swamp-shrub or swamp-forest composed of Alder, Ilex, Salix, Betula, Acer rubrum and a few other species. The commoner species of the marsh-meadows are the following:

Carex stricta *Lam.*
" stipata *Muhl.*
" vulpinoidea *Michx.*
" scoparia *Schk.*
Cinna arundinacea *L.*
Juncus effusus *L.*
Iris versicolor *L.*
Acorus calamus *L.*
Lilium canadense *L.*
Scirpus atrovireus *Muhl.*
" cyperinus (*L.*) *Kunth*
Panicularia canadensis (*Michx.*) *Kuntze*

These meadows were without question at one time covered by forest and where undisturbed for a few years show in many places a very rapid succession of vegetation back to the forest type. This is usually first indicated by an abundance of royal-fern, cinnamon-fern, meadow-rue, Canada lily and other tall, herbaceous species which generally precede the development of a swamp-shrub formation consisting of:

Alnus rugosa (*Du Roi*) *Spreng.*
Salix lucida *Muhl.*
Nemopanthus mucronata (*L.*) *Trel.*
Viburnum cassinoides *L.*
Salix sericea *Marsh.*
Aronia melanocarpa (*Michx.*) *Britt.*
Ilex verticillata (*L.*) *A. Gray.*
Cornus femina *Mill.*
Vaccinium corymbosum *L.*

These in turn being succeeded by the swamp-forest type consisting of red maple (Acer rubrum L.), American elm (Ulmus americana L.), black gum (Nyssa sylvatica Marsh.), silver maple (Acer saccharinum L.), yellow birch (Betula lutea Michx. f.), hemlock (Tsuga canadensis (L.) Carr.) and a few others of less importance.

In the shallow water of one of the arms of Fish creek (figure 11) occurs a small growth of shrubs forming a dense thicket with the forest in the background. This is composed almost exclusively of Cornus femina Mill., Cephalanthus occidentalis L., Decodon verticillatus (L.) Ell., with a few red maples, alders, Ilex and Comarum. This aquatic "forewold" is also beautifully developed along both banks of Black creek (figure 12), where the growth consists almost entirely of Cornus femina Mill.

Sandy Fields

Sandy fields, whether of present cultivation or abandoned, as are most of them, must be regarded as artificial habitats and it is in such situations that one finds the majority of introduced species.

Fig. 11 A small swamp-shrub formation in shallow water of a branch of Fish creek consisting of a dense thicketlike growth of Cornus femina with some Cephalanthus, Decodon, Ilex, Comarum, Salix, Betula lutea and Acer rubrum

Fig. 12 View looking north on Black creek which flows through a hardwood swamp of red maple, silver maple, black ash, elm, and black gum. The stream is bordered by a dense marginal growth of *Cornus femina* with some Cephalanthus, Decodon, Alnus and Ilex

The vegetation upon these fields which have been abandoned is largely of an adaptive character, consisting chiefly of the following species:

Panicum dichotomiflorum *Michx.*
" depauperatum *Muhl.*
" linearifolium *Scribn.*
" dichotomum *L.*
" meridionale *Ashe*
" tsugetorum *Nash*
" capillare *L.*
Anthoxanthum odoratum *L.*
Aristida dichotoma *Michx.*
Deschampsia flexuosa (*L.*) *Trin.*
Bromus secalinus *L.*
Lolium perenne *L.*
Cyperus filiculmis *Vahl.*
Carex pennsylvanica *Lam.*
" umbellata *Schk.*
" scoparia *Schk.*
" muhlenbergii *Schk.*
Carex crawfordii *Fernald*
Juncus tenuis *Willd.*
" filiformis *L.*
Juncoides campestre (*L.*) *Kuntze*
Hypoxis hirsuta (*L.*) *Coville*
Comptonia peregrina (*L.*) *Coulter*
Polygonella articulata (*L.*) *Meissn.*
Arenaria serpyllifolia *L.*
Rubus hispidus *L.*
Lupinus perennis *L.*
Lespedeza capitata *Michx.*
Andropogon furcatus *Muhl.*
Oenothera biennis *L.*
Verbascum blattaria *L.*
" thapsus *L.*
" lychnitis *L.*
Lepidium virginicum *L.*

LIST OF FERNS, CONIFERS AND FLOWERING PLANTS OF THE ONEIDA LAKE REGION

PTERIDOPHYTA

Ophioglossaceae Presl.

Botrychium obliquum *Muhl.*

Botrychium dissectum *Spreng.* Intermediate forms between this and the preceding species are rather frequent.

Botrychium silaifolium *Presl.* Sandy field along edge of woods. August 24, 1906 (H. D. House). This station has since been obliterated, but the species doubtless occurs elsewhere in this vicinity.

Botrychium virginianum (*L.*) *Sw.* Common in moist woodlands.

Ophioglossum vulgatum *L.* Depressions in the sandy plains.

Osmundaceae R. Br.

Onoclea sensibilis *Linn.* Common in wet and moist places.

Osmunda regalis *Linn.* Open swamps and wet woods. Common.

Osmunda cinnamonea *Linn.* Swamps and woods. Common.

Osmunda claytoniana *Linn.* Open swamps. Less abundant than the two preceding species.

Matteucia struthiopteris (*L.*) *Todaro.* Alluvial soil along Fish creek. The American form of this fern is called Matteucia nodulosa (Michx.) by Fernald (Rhodora 17:161. 1915). The name Pteretis Raf. (1818) antedates Matteucia Todaro (1866) and Nieuwland (Am. Mid. Nat. 4:333. 1916) proposes to call our Ostrich-fern Pteretis nodulosa (Michx.) Nwd.

Dennstaedtia punctilobula (*Michx.*) *Moore.* Common in rather moist woods and fields.

Polystichum acrostichoides (*Michx*). *Schott.* Moist woods, etc. Common.

Dryopteris noveboracensis (*L.*) *A. Gray.* Dry woods and fields and moist meadows. Common.

Dryopteris thelypteris (*L.*) *A. Gray.* Open marshy places. Very abundant.

Dryopteris simulata *Davenport.* A single station for this rare species exists near Sylvan Beach.

Dryopteris cristata (*L.*) *A. Gray.* Wet mossy thickets and bogs. Rare.

Dryopteris clintoniana (*D. C. Eaton*) *Dowell.* Low moist woods. Rare.

Dryopteris marginalis (*L.*) *A. Gray*. Woods and thickets. Common.

Dryopteris spinulosa (*Muell.*) *Kuntze*. Low moist woodlands. Common.

Dryopteris intermedia (*Muhl.*) *A. Gray*. Low moist woodlands. Common.

Phegopteris dryopteris (*L.*) *Fee*. Low woods and mossy swamps. Not common.

Anchistea virginica (*L.*) *Presl*. Open sunny marshes. Common. A coastal plain species which has also been found at Kasoag and north of Schroeppel's bridge in Oswego county.

Asplenium platyneuron (*L.*) *Oakes*. Woods and banks near North Bay.

Athyrium pycnocarpon (*Spreng*). *Tidestrom*. Low woods near South Bay.

Athyrium thelypteroides (*Michx.*) *Desv*. Asplenium acrostichoides *Sw*. Low woodlands. Rare.

Athyrium felix-foemina (*L.*) *Roth*. Woods and banks. Common. The most abundant form is A. felix-foemina var. Michauxii Mett. (= Athyrium angustum (Willd.) Presl.)

Adiantum pedatum *Linn*. Woods and thickets. Not common.

Pteridium aquilinum (*L.*) *Kuhn*. Sandy fields and dry woods. Everywhere abundant.

Salviniaceae Reichenb.

Azolla caroliniana *Willd*. Abundant on the surface of Black creek. Also reported from here by Warne, 28th Ann. Rep't State Botanist. p. 85, 1876.

Equisetaceae Michx.

Equisetum arvense *Linn*. Sandy fields and embankments. Very abundant.

Equisetum pratense *Ehrh*. Marshy places and along streams.

Equisetum sylvaticum *L*. Swampy woodlands adjacent to Black creek.

Equisetum fluviatile *L*. Swamps along streams.

Equisetum littorale *Kuehl*. Marshy lake shore. North Bay, H. D. House, June 19, 1915, *No. 5866*. Chiefly the var. gracile Milde.

Equisetum hyemale *L*. Sandy soil. Very abundant, the var. intermedium Eaton frequent along the lake shore.

Lycopodiaceae Michx.

Lycopodium lucidulum *Michx.* Moist shaded woodlands, usually under evergreens. Common.

Lycopodium inundatum *L.* Depressions and dessicated bogs in the sandy plains east of Verona Beach.

Lycopodium obscurum *L.* Low or moist woodlands.

Lycopodium clavatum *L.* Open woods and thickets.

Lycopodium complanatum *L.* Woods and thickets. Rare.

Lycopodium tristachyum *Pursh.* Sandy soil along edge of woods or in open dry woods. Common.

Lycopodium annotinum *L.* Under hemlocks and pines near Panther lake north of Constantia, but not recorded from the east end of the lake.

Selaginellaceae Underwood

Selaginella apus (*L.*) *Spring.* Moist soil in shaded places, frequently in swamps and often overlooked because of its small size.

Isoetaceae Underwood

Isoetes macrospora *Durieu.* Shallow water, mouth of Oneida creek.

SPERMATOPHYTA

GYMNOSPERMAE

Pinaceae Lindl.

Pinus strobus *L.* Common in former days forming a large and important element of the forests in this region. Old stumps remaining in the woods show that it frequently reached a diameter of five feet.

Pinus rigida *Miller.* Common in the sandy woods close to the lake shore and on the plains east of Verona Beach.

Pinus resinosa *Ait.* Reported from the Pine plains of Rome by Kneiskern. Not seen recently in this region.

Picea rubens *Sargent.* A few young trees of this species occur in the second growth on low land east of Sylvan Beach. Possibly of recent introduction from the north.

Tsuga canadensis (*L.*) *Carr.* One of the most abundant forest trees of this section.

Thuja occidentalis *L.* In swamps along the base of the hills toward Vienna, about two miles northeast of Sylvan Beach, but rare or absent from the swamps in the immediate vicinity of the east end of Oneida lake.

Taxaceae Lindl.

Taxus canadensis *Marsh.* Common in low shaded woodlands.

ANGIOSPERMAE

MONOCOTYLEDONES

Typhaceae J. St. Hil.

Typha latifolia *L.* Common in open marshes and swales.

Sparganiaceae Agardh.

Sparganium eurycarpon *Engelm.* Marshy places. Common.
Sparganium americanum *Nutt.* Shallow water and swamps.

Zannichelliaceae Dumort.

Potamogeton angustifolius *B. & P.* (Peck)
Potamogeton epihydrus *Raf.* (*P. nuttallii Cham. & Schlecht.*)
Potamogeton diversifolius *Raf.*
Potamogeton heterophyllus *Schreb.*
Potamogeton lucens *L.* (Oneida lake, Peck)
Potamogeton compressus *L.*
Potamogeton natans *L.*
Potamogeton pectinatus *L.*
Potamogeton perfoliatus *L.*
Potamogeton praelongus *Wulf.* (Peck)
Potamogeton pusillus *L.*
Potamogeton richardsonii (*Benn.*) *Rydb.* (Peck)
Naias flexilis (*Willd.*) *Rost. & Schmidt.* Quiet waters of bays on north and south shores of the lake and frequently brought by the wind into Fish creek.

Alismaceae DC.

Alisma subcordatum *Raf.* (A. plantago-aquatica *Auth.*) Common everywhere in shallow water and marshy places.
Sagittaria latifolia *Willd.* In similar situations and as abundant as the preceding species.
Sagittaria graminea *Michx.* Shallow water and marshes along the shores of the lake on the north and south sides. Also reported from here by Kneiskern.

Scheuchzeriaceae Agardh.

Triglochin palustris *L.* Mossy and boggy places in the sandy plains east of the head of the lake.

Scheuchzeria palustris *L.* Abundant in the swamps of Rome, (*Kneiskern.*) Probably to be looked for in situations similar to the preceding species.

Vallisneriaceae Dumort.

Philotria canadensis (*Michx.*) *Britton.* Shallow and quiet waters of the lake. Common.

Philotria nuttallii (*Planch.*) *Rydb.* Fish creek (Underwood).

Vallisneria spiralis *L.* Shallow waters of the lake and adjacent streams.

Gramineae Juss.[1]

Syntherisma filiforme (*L.*) *Nash.* Sandy soil. Rare.

Syntherisma sanguinale (*L.*) *Dulac.* Sandy fields and waste places. Common.

Syntherisma ischaemum (*Schreb.*) *Nash.* (Syntherisma humifusum *Rydb.*) Fields and waste places. Common.

Andropogon furcatus *Muhl.* Sandy ridges and fields east of Verona Beach. Locally abundant.

Sorghastrum nutans (*L.*) *Nash.* Sandy plains. Common. Also reported by Kneiskern.

Echinochloa crus-galli (*L.*) *Beauv.* Waste and cultivated ground.

Echinochloa frumentacea (*Roxb.*) *Link.* Sandy plains and shores.

Panicum addisonii *Nash.* Sylvan Beach. Haberer, *No. 3293.*

Panicum agrostoides Spreng. Moist shores of the lake.

Panicum ashei *Pearson.* Open woods, North Bay, House, June 19, 1915, *No. 5865.*

Panicum boreale *Nash.* North Bay. House.

Panicum boscii *Poir.* Moist thickets, rare.

Panicum capillare *L.* Sandy shores. Rare.

Panicum columbianum *Scribn.* (House, *No. 5716.*)

Panicum dichotomiflorum *Michx.*

Panicum dichotomum *L.*

Panicum clandestinum *L.*

Panicum depauperatum *Muhl.*

Panicum huachucae *Ashe.* This and the variety silvicola *Hitchc. & Chase* are very abundant in open woodlands.

Panicum implicatum *Scribn.* (House, *No. 5703.*)

Panicum latifolium *L.*

Panicum lindheimeri *Nash.*

[1] I am indebted to Professor Hitchcock of the United States Department of Agriculture for the determination of most of the grasses here reported.

Panicum linearifolium *Scribn.*
Panicum meridionale *Ashe* (P. subvillosum *Ashe*). (House.)
Panicum philadelphicum *Bernh.* Thickets and roadsides. Rare.
Panicum sphaerocarpon *Ell.* (House, *No. 5618.*)
Panicum tsugetorum *Nash.* Common.
Panicum spretum *Schult.* Sylvan Beach. (House.)
Panicum tennesseensis *Ashe.* Dry oak woods, Sylvan Beach. (House.)
Panicum virgatum *L.* Island in Oneida lake (Kneiskern, in herb. Sartwell, Hamilton College fide Paine).
Panicum xanthophysum *A. Gray.* Near Sylvan Beach. House, July 20, 1915. "Pine barrens along Wood creek near Oneida lake." Gray.
Chaetochloa verticillata (*L.*) *Scribn.*
Chaetochloa glauca (*L.*) *Scribn.*
Chaetochloa viridis (*L.*) *Scribn.* Only the last two have been seen around Sylvan Beach, but the first may confidently be looked for as it is abundant like the others in waste places and fields throughout this region.
Zizania aquatica *L.* Shallow water and marshes along the north and south shores of Oneida lake. Also reported from here by Kneiskern.
Homalocenchrus virginicus (*Willd.*) *Britt.* Open swamps. Common.
Homalocenchrus oryzoides (*L.*) *Poll.* Marshes along the lake shore and swales and swamps east of the lake. Common.
Phalaris arundinacea *L.* Ditches and marshes. Common.
Anthoxanthum odoratum *L.* Everywhere abundant in sandy fields and meadows.
Oryzopsis pungens (*Torr.*) *Hitchc.* (O. canadensis *Torr.*) "Near Oneida lake." Gray.
Oryzopsis racemosa (*J. E. Smith*) *Ricker.* (O. melanocarpa *Muhl.*) Around Oneida lake. Gray, fide Paine.
Aristida dichtoma *Michx.* Extremely abundant in the sandy fields and plains.
Muhlenbergia foliosa *Trin.* Swamps and marshy fields. Common.
Muhlenbergia racemosa (*Michx.*) *B. S. P.* Marshes and open swamps. Common.
Brachyelytrum erectum (*Schreb.*) *Beauv.* Moist open woods. Common in places.
Phleum pratense *L.* Common in waste places and fields.
Alopecurus aristulatus *L.* Marshy meadows. Rare. Also reported from near Fort Bull, along Wood creek by Kneiskern.

Sporobolus uniflorus (*Michx.*) *Scribn. & Merr.* Moist sandy soil. Common.

Cinna arundinacea *L.* Marshes, swamps and wet thickets. Common.

Cinna latifolia (*Trev.*) *Griseb.* Open wet woods. Rare.

Agrostis alba *L.* Fields, meadows and marshes. The var. vulgaris (With.) Thurber common in moist fields, and the var. aristata A. Gray in sandy places.

Agrostis maritima *Lam.* Moist sand along the shore of Oneida lake. (House, *No. 5615.*) (A. coarctata Ehrh.)

Agrostis perennans (*Walt.*) *Tuckerm.* Dry open woodlands and fields.

Agrostis hyemalis (*Walt.*) *B. S. P.* Meadows, fields and marshes. Common.

Calamagrostis canadensis (*Michx.*) *Beauv.* Marshes, swamps and shores. Common.

Deschampsia caespitosa (*L.*) *Beauv.* Low meadows and fields.

Deschampsia flexuosa (*L.*) *Trin.*. One of the characteristic grasses of the very dry sandy plains east of the lake and very abundant.

Avena sativa *L.* Persistent in fields and along roadsides.

Arrhenatherum elatius (*L.*) *Beauv.* Fields and waste places.

Danthonia spicata (*L.*) *Beauv.* Common in the dry sandy plains.

Danthonia compressa *Austin.* Open woods, North Bay. (House.)

Spartina michauxiana *Hitchc.* Marshes and shallow water along the shores of Oneida lake.

Eleusine indica (*L.*) *Gaertn.* Waste places and fields.

Phragmites phragmites (*L.*) *Karst.* Swamps and shores, usually in large colonies.

Eragrostis capillaris (*L.*) *Nees.* A common weed in all cultivated fields and waste places.

Eragrostis pilosa (*L.*) *Beauv.*

Eragrostis major *Host.*

Eragrostis hypnoides (*Lam.*) *B. S. P.* Described by Gray as abundant over the low sandy shores all along the head of Oneida lake, which is still true.

Sphenopholis pallens (*Spreng.*) *Scribn.* (Eatonia pennsylvanica of previous reports.)

Melica striata (*Mx.*) *Hitchc.* (Trisetum purpurascens *Torr.* not *DC.*) Swampy woodlands east of Verona Beach. Also reported from near Wood creek by Kneiskern.

Dactylis glomerata *L.* Rich soil around dwellings.

Poa alsodes *A. Gray.* North Bay. (House.)

Poa compressa *L.* Meadows and fields.

Poa annua *L.* Around dwellings and in dooryards.

Poa triflora *Gilib.* Woods near Sylvan Beach. House, June 21, 1915, *No. 5869.*

Panicularia laxa *Scribn.* Open swamps.

Panicularia canadensis (*Michx.*) *Kuntze.* Common in swamps.

Panicularia torreyana (*Spreng.*) *Merrill* (P. elongata (*Torr.*) *Kuntze*). Open wet wooded places. House, July 11, 1905, *No. 1184.*

Panicularia nervata (*Willd.*) *Kuntze.* Low meadows and swamps.

Panicularia pallida (*Torr.*) *Kuntze.* "Oneida lake" (Peck); "Abundant on shore of Oneida lake" (Torrey); "Wood creek near New London" (Kneiskern).

Festuca octoflora *Walt.* Common in sandy fields, meadows and open woods.

Festuca elatior *L.* Common in fields and meadows.

Bromus ciliatus *L.* Woods and thickets. Not common.

Bromus kalmii *A. Gray.* Banks of Fish creek and woods along Oneida creek.

Bromus secalinus *L.* Waste places, banks etc.

Lolium perenne *L.* Fields, roadsides etc. Common.

Agropyron repens (*L.*) *Beauv.* Common along roadsides, railroads, fences and in meadows.

Elymus virginicus *L.* Low woods and thickets. Common.

Elymus canadensis *L.* Banks of Fish creek and Oneida creek.

Cyperaceae J. St Hil.

Cyperus rivularis *Kunth.* Wet soil, depressions in the sand plains and sandy shores.

Cyperus inflexus *Muhl.* (C. aristatus *Boeckl.*) Sandy shores of Oneida lake. Also reported from here by Gray and by Kneiskern.

Cyperus dentatus *Torr.* Swamps and depressions in the sand plains east of the head of Oneida lake.

Cyperus esculentus *L.* (C. phymatodes *Muhl.*) "Shores of Oneida lake." Torrey.

Cyperus erythrorhizos *Muhl.* Wet soil and along streams.

Cyperus speciosus *Vahl.* (C. michauxianus *Schult.*) "Borders of Oneida lake." Kneiskern.

Cyperus strigosus *L.* Wet places and marshes. Common. "Borders of swamps on the plains of Rome." Kneiskern.

Cyperus filiculmis *Vahl.* Abundant everywhere in the dry sandy soil of the fields and plains east of the head of the lake. Our northern form has recently been designated as C y p e r u s m a c i l e n t u s (Fernald) Bicknell.

Eleocharis ovata (*Roth*) *R. & S.* (E. diandra *C. Wright*). Sandy shores of Oneida lake.

Eleocharis obtusa (*Willd.*) *R. & S.* Wet soil, edge of streams, swamps, and in wet meadows.

Eleocharis palustris (*L.*) *R. & S.* Represented here by the very stout variety Vigens *Bailey*, common at South Bay, and the variety Glaucescens, common at North Bay along the lake shore and around Sylvan Beach.

Eleocharis acicularis (*L.*) *R. & S.* Common in wet or damp soil.

Eleocharis tenuis (*Willd.*) *Schultes.* Common in grassy swamps and swales.

Eleocharis intermedia (*Muhl.*) *Schultes.* Moist sand and marshy places. Including the variety Habereri *Fernald.*

Eleocharis mutata (*L.*) *R. & S.* (E. quadrangulata *R. & S.*) "Outlet of Oneida lake." Gray's Manual. Not reported from the east end of the lake.

Stenophyllus capillaris (*L.*) *Britton.* Sandy fields.

Fimbristylis geminata (*Nees*) *Kunth.* (F. frankii *Steud.*) Moist sand along the east shore of Oneida lake. Reported in Torreya 3: p. 165 as F. autumnalis.

Eriophorum viridicarinatum (*Engelm.*) *Fernald.* In boglike depressions of the sand plains and in wet meadows. Common.

Eriophorum virginicum *L.* Bogs and swamps. Common.

Scirpus debilis *Pursh.* (S. smithii *A. Gray.*) Common in damp sand along the shore of Oneida lake. Also reported from here by Kneiskern.

Scirpus americanus *Pers.* (S. pungens *Vahl.*) Very common in marshes and shallow water along the lake shore and in marshes.

Scirpus validus *Vahl.* Marshes and shallow water along the lake shore.

Scirpus atrovirens *Muhl.* Swamps and wet meadows. Common. Also the variety pycnocephalus *Fern.*

Scirpus microcarpus *Presl.* (C. rubrotinctus *Fern.*) Wet wood and swamps. Common.

Scirpus pedicellatus *Fernald.* Wet meadows, swales and swamps.

Scirpus fluviatilis (*Torr.*) *A. Gray.* Borders of Oneida lake (Kneiskern) Lake shore near mouth of Oneida creek (House).

Scirpus cyperinus (*L.*) *Kunth.* Swamps and marshes. Common. Also the varieties pelius Fernald and condensatus Fernald.

Scirpus atrocinctus *Fernald.* Swamps. Rare.

Hemicarpa micrantha (*Vahl.*) *Pax.* Moist sand along the shore of Oneida lake. Common.

Dulichium arundinaceum (*L.*) *Britton*. Swamps and marshes. Common.

Rhyncospora alba (*L.*) *Vahl*. Sphagnous depressions in the sand plains. Rare.

Rhynchospora capillacea *Torr*. "Cranberry marsh at the head of Oneida lake" (Kneiskern). Torrey, Flora N. Y. 2:364, 1843.

Rhynchospora glomerata (*L.*) *Vahl*. Swamps.

Mariscus mariscoides (*Muhl.*) *Kuntze*. Marshes along the north shore near North bay and at Panther lake, north of Constantia.

Scleria triglomerata *Michx*. "Plains of Rome" (Kneiskern).

Carex aenea *Fernald*.

Carex annectens *Bicknell*.

Carex albicans *Willd*. Woods, North Bay. (House.)

Carex arctata *Boott*. Cleared land west of Fort Bull (Paine).

Carex Asa-Grayi *Bailey*. Wood creek. Gray.

Carex bromoides *Schk*. Swamps. Not common.

Carex canascens *L*. Sylvan Beach. (House, July 11, 1915, *No. 1180*.)

Carex castanea *Wahl*. Near Fort Bull (Haberer).

Carex cephalophora *Muhl*.

Carex crawfordii *Fernald*.

Carex crinita *Lam*.

Carex communis *Bailey*.

Carex cristatella *Britton*. (C. cristata *Schw*.)

Carex diandra *Schk*. Open boggy swamps. Rare.

Carex disperma *Dewey*. Mossy swamps.

Carex debilis *Michx*. "Border of streams near Oneida lake," Kneiskern. "Site of old Fort Bull on Wood creek," Vasey.

Carex echinata *Murr*. (C. Leersii Willd.; C. stellulata Good.) with the variety angustata Boott.

Carex folliculata *L*.

Carex filiformis *L*. "Swamps just over the ridge along the head of Oneida lake," Paine.

Carex formosa *Dewey*. "Site of old Fort Bull, near Rome," Vasey.

Carex flava *L*. Bogs and mossy depressions in the sand plains.

Carex gracillima *Schw*.

Carex granularis *Muhl*.

Carex gynandra *Schw*.

Carex hystricina *Muhl*.

Carex interior *Bailey*.

Carex intumescens *Rudge*.

Carex lacustris *Willd*. "Oneida lake," Kneiskern.

Carex laxiflora *Lam.*
Carex laxiculmis *Schw.*
Carex leptalea *Wahl.*
Carex lupulina *Muhl.*
Carex lupliformis *Sartwell.*
Carex lurida *Wahl.*
Carex muhlenbergii *Schk.* Sandy fields and woods.
Carex oligocarpa *Schk.* "Borders of sandy plains, Rome," Kneiskern. "Banks of Woods creek between New London and Oneida lake," Gray.
Carex oligosperma *Michx.* "Oneida lake," Kneiskern. "Bogs in sphagnum swales 6 miles west of Rome," Paine.
Carex pallescens *L.* Woods near North Bay. Common.
Carex pedunculata *Muhl.*
Carex pennsylvanica *Lam.* Very abundant on sandy fields and plains.
Carex plantaginea *Lam.* Woods near North Bay. Common.
Carex projecta *Mackenzie.*
Carex retrorsa *Schw.*
Carex rosea *Schk.*
Carex rosaeoides *E. C. Howe.* Near Fort Bull (Peck).
Carex scirpoides *Schk.* Common.
Carex scoparia *Schk.* With the variety moniliformis *Fern.* very common in wet places.
Carex scabrata *Schw.* Marshy places. Rare.
Carex stipata *Muhl.*
Carex stricta *Lam.* Common in swamps, forming large hummocks.
Carex sprenglei *Dewey.* Oneida lake, Vasey.
Carex tenuiflora *Wahl.* "Open moss-swamp west of Fort Bull, south of the canal where it is abundant," Paine.
Carex tenella *Schk.* Mossy depressions and bogs of the sand plains. "Bogs of Rome." (Paine). "Beyond Fort Bull in low open woods. In the extensive swamp northwest of New London, on north side of Wood creek." (Paine).
Carex trisperma *Dewey.* Mossy woods and thickets. House. Also reported by Kneiskern.
Carex tribuloides *Wahl.*
Carex umbellata *Schk.* Sandy woods. Common. (House.)
Carex tenuis *Rudge.* Woods near Sylvan Beach, House, July 11, 1905, *No. 1211.*
Carex triceps *Michx.* Woods near Sylvan Beach, House, July 11, 1905, *No. 1216.*

Carex varia *Muhl.* Dry woods. Not common.
Carex vulpinoidea *Michx.* Common in wet places.
Carex virescens *Muhl.*

Araceae Neck.

Arisaema triphyllum (*L.*) *Torr.*
Arisaema pusillum (*Peck*) *Nash.* Bogs and mossy thickets of the sand plains.
Peltandra virginica (*L.*) *Kunth.* Swamps and margins of back waters.
Calla palustris *L.* Wet woods, bogs, and mossy thickets.
Spathymea foetida (*L.*) *Raf.* (Symplocarpus foetidus *Nutt.*) Low wet woods and meadows.
Acorus calamus *L.* Wet meadows, etc. Common.

Lemnaceae Dumort.

Spirodela polyrhiza (*L.*) *Schleid.* Surface of quiet water. Fish creek, Black creek and ponds.
Lemna trisulca *L.* Shallow water of ditches, ponds etc. Rare.
Lemna minor *L.* Surface of quiet water, everywhere common.
Wolffia columbiana *Karst.* Surface of Black creek. Common.

Eriocaulaceae Lindl.

Eriocaulon septangulare *With.* (E. articulatum (*Huds.*) *Morong*) Shallow water of the shore of Oneida lake and sandy shores of Fish creek.

Pontederiaceae Dumort.

Pontederia cordata *Linn.* Shallow water along the shore of Oneida lake, North and South bay and along Fish creek, Black creek, Oneida creek and other wet places.
Heteranthera dubia (*Jacq.*) *MacM.* Shallow water near mouth of Oneida creek and shore of the lake. (House.)

Juncaceae Vent.

Juncus dudleyi *Wiegand.* Moist depressions in the sand plains. A rather unusual habitat for this species which is confined chiefly to marl bogs. (Specimens determined at the Gray herbarium.)
Juncus effusus *L.*
Juncus filiformis *L.* Swales and wet places. Also reported from head of Oneida lake by Gray.
Juncus bufonius *L.* Moist sand and waste places. Common.
Juncus tenuis *Willd.* Common in dry and moist places.

Juncus secundus *Beauv.* Sandy fields. Common.
Juncus marginatus *Rostk.* Woods and open places. Not rare.
Juncus pelocarpus *E. Meyer.* Swamps and marshy lake shores.
Juncus militaris *Bigel.* Shallow water of sheltered bays along north shore. Rare.
Juncus articulatus *L.* Sylvan Beach. (Peck.)
Juncus nodosus *L.* Common.
Juncus torreyi *Coville.* Marshes along head of the lake. Rare.
Juncus canadensis *J. Gay.* Moist or wet depressions in the sand plains, and along shores.
Juncus brevicaudatus (*Engelm.*) *Fernald.* Moist depressions in the sand plains (*Haberer*).
Juncus acuminatus *Michx.* Shallow water of pools and depressions and wet places. Common.
Juncoides carolinae (*S. Wats.*) *Kuntze* (Luzula saltuensis *Fern.*) Dry woods. Common.
Juncoides campestre (*L.*) *Kuntze.* Fields and open woods. Very common.

Melanthaceae R. Br.

Veratrum viride *Ait.* Low meadows, wet woods, and stream banks. Not common.

Liliaceae Adans.

Allium tricoccum *Ait.* Moist woods. Common in woods north and south of the lake. Rare at Sylvan Beach.
Allium canadense *L.* Low meadows and thickets, not common.
Lilium philadelphicum *L.* Dry woods and thickets. Common.
Lilium canadense *L.* Low meadows and swamps. Common.
Erythronium americanum *Ker.* Woods. Common.
Hemerocallis fulva *L.* (Common Day Lily). A frequent species established along roadsides, shores and old yards, especially on the north and south shores of the lake.

Convallariaceae Link.

Asparagus officinalis *L.* Frequent as an escape.
Clintonia borealis (*Ait.*) *Raf.* Moist woods, most usually under evergreens. Common.
Vagnera racemosa (*L.*) *Morong.* Woods and thickets. Not abundant.
Vagnera stellata (*L.*) *Morong.* Rather common in alluvial soil along the streams.
Vagnera trifolia (*L.*) *Morong.* Mossy thickets and bogs of the sand plains.

Unifolium canadense (*Desf.*) *Greene*. Common in woods.
Uvularia perfoliata *L.* Common in woods. (The large Bellflower, U. grandiflora *J.E. Sm.*, common on the hills south of Oneida lake was not observed around Sylvan Beach, but doubtless occurs in some of the woods on the hills north of the lake.)
Uvularia sessilifolia *L.* Sandy woods. Common. (Oakesia sessilifolia *Wats.*)
Streptopus roseus *Michx.* Moist woods. Common.
Polygonatum biflorum (*Walt.*) *Ell.* Woods and thickets, common.
Polygonatum commutatum (*R.& S.*) *Dietr.* Moist woods along streams.

Trilliaceae Lindl.

Mediola virginiana *L.* Moist woodlands. Common.
Trillium grandiflorum (*Michx.*) *Salisb.* Woods, North Bay. Usually absent from the sandy woods.
Trillium erectum *L.* Woods and thickets. Common.
Trillium cernuum *L.* Moist thickets in sandy soil. Rare.
Trillium undulatum *Willd.* Woodlands. Common.

Smilaceae Vent.

Smilax herbacea *L.* Woods and thickets. Common.
Smilax rotundifolia *L.* Moist thickets especially along Black creek.
Smilax hispida *Muhl.* Reported from Cicero swamp, and doubtless occurs in other swamps of this region. Seen by the author at Pecksport, Madison county, and at Panther lake, Oswego county.

Amaryllidaceae Lindl.

Hypoxis hirsuta (*L.*) *Coville*. Sandy fields and meadows. Common.

Iridaceae Lindl.

Iris versicolor *L.* Wet meadows, marshes, and shores.
Sisyrinchium angustifolium *Mill.* Fields and meadows. Common.
Sisyrinchium graminoides *Bicknell.* Wet meadows. Rare.

Orchidaceae Lindl.

Criosanthes arietina (*R. Br.*) *House* (Cypripedium arietinum *R. Br.*). Recorded from east of Oneida lake by Dr Asa Gray (Torrey, Flora of N. Y. 2:288, 1843.)
Cypripedium acaule *Ait.* (Fissipes acaulis *Small*). Sandy woods. Common.

Galeorchis spectabilis (*L.*) *Rydb.* Moist woods. Rare.

Coeloglossum bracteatum (*Willd.*) *Parl.* Moist open woods along Black creek.

Gymnadeniopsis clavellata (*Michx.*) *Rydb.* Wet or moist woods. Common.

Pogonia ophioglossoides (*L.*) *Ker.* Mossy depressions in the sand plains. Rare.

Lysias orbiculata (*Pursh*) *Rydb.* Woods back of Verona Beach. Panther lake north of Constantia. Rare.

Lysias hookeriana (*A. Gray*) *Rydb.* "Pine barrens along Wood creek near New London," Paine.

Blephariglottis ciliaris (*L.*) *Rydb.* Depressions in the sand plains. Rare.

Blephariglottis lacera (*Michx.*) *Farwell.* Low woods and thickets. Common.

Blephariglottis psycodes (*L.*) *Rydb.* Meadows and swamps. Common.

Blephariglottis grandiflora (*Bigel.*) *Rydb.* "Shady swamp west of Fort Bull, Rome," Paine.

Isotria verticillata (*Willd.*) *Raf.* Reported by Paine from mossy bogs on the plains of Rome.

Triphora trianthophora (*Sw.*) *Rydb.* Reported by Kneiskern from the pine plains west of Rome.

Limodorum tuberosum *L.* Mossy depressions and bogs. Common.

Ibidium strictum (*Rydb.*) *House* Boglike depressions.

Ibidium cernuum (*L.*) *House.* Meadows, swamps and rarely in almost dry sandy soil.

Ibidium gracile (*Bigel.*) *House.* Sandy fields. Common.

Peramium tesselatum (*Lodd.*) *Heller.* Coniferous woods. Rare.

Peramium pubescens (*Willd.*) *MacM.* Chiefly in dry woods. Infrequent.

Liparis loeselii (*L.*) *L. C. Rich.* Mossy depressions of the sand plains. Reported from about Oneida lake by Gray.

Corallorhiza maculata *Raf.* Woods and thickets. Rare.

Corallorhiza odontorhiza (*Willd.*) *Nutt.* Woods and thickets.

DICOTYLEDONES

Saururaceae Lindl.

Saururus cernuus *L.* Shallow water in swamps along Fish creek, Black creek and Oneida creek. Common. Reported from the "borders of Oneida lake" by Kneiskern and by Gray.

Juglandaceae Lindl.

Juglans cinerea *L.* Woods and bottom lands, not common near Sylvan Beach but frequent at South Bay and North Bay.
Hicoria cordiformis (*Wang.*) *Britt.* Low woods and along streams.
Hicoria glabra (*Mill.*) *Britton.* Low meadows and woods.
Hicoria ovata (*Mill.*) *Britt.* Rich soil, North Bay.

Myricaceae Dumort.

Comptonia peregrina (*L.*) *Coulter.* "Plains of Rome and Oneida lake" (Kneiskern). Not seen near Sylvan Beach.
Myrica gale *L.* Swamps near Panther lake. Not observed around the head of Oneida lake.

Salicaceae Lindl.

Populus grandidentata *Michx.*
Populus atheniensis *Ludw.* Neue wilde Baumz. 35, 1760. (P. tremuloides *Michx.* 1803.). This and the preceding are exceedingly abundant on burned over areas, along with Betula populifolia.
Populus deltoides *Marsh.* Low woods along Black creek. Also reported from this region by Kneiskern, Gray and others.
Populus nigra *L.* Cultivated and sparingly escaped.
Salix nigra *Marsh.* Along streams and shores. Common.
Salix lucida *Muhl.* Swamps and wet places. Common.
Salix cordata *Muhl.*
Salix discolor *Muhl.*
Salix petiolaris *J. E. Smith.*
Salix humilis *Marsh.* Lake shore amd pine plains. Also reported from here by Kneiskern.

Betulaceae Agardh.

Carpinus caroliniana *Walt.* Low woods.
Corylus americana *Walt.* Woods and thickets. Common.
Betula populifolia *Marsh.* Common everywhere on the sandy plains east of the lake.
Betula lutea *Michx. f.* Rich woods. Common.
Betula nigra *L.* Banks of Fish creek and Wood creek. Rare. Reported from Fish creek by Paine and also from Deerfield, Oneida co.
Alnus incana (*L.*) *Willd.* Very common everywhere.
Alnus rugosa (*DuRoi*) *Spreng.* Rare.

Fagaceae Drude

Fagus grandifolia *Ehrh.*

Castanea dentata *Borkh.* Woods and banks, north shore of lake, also south of the lake but rare or absent on the sand plains.

Quercus rubra *L.* Common especially in the woods along the head of the lake.

Quercus velutina *Lam.* Sandy woods. Common.

Quercus ilicifolia *Wang.* "Plains of Rome," Paine. Not found at Sylvan Beach where the character of the soil would lead one to expect it, and Sargent (Silva of N. Am. 8:156) says that this species "apparently does not reach central New York". Paine was a careful observer but in this instance he may have been mistaken.

Quercus alba *L.* Sandy woods. Common.

Quercus bicolor *Willd.* Swamps and low woods. Common.

Ulmaceae Mirbel

Ulmus americana *L.* Low woods. Common.

Ulmus fulva *Michx.* Bottom lands. Not rare.

Celtis occidentalis *L.* "Near Oneida lake" (Kneiskern).

Urticaceae Reichenb.

Urtica gracilis *Ait.* Low woods and swamps. Common.

Urticastrum divaricatum (*L.*) *Kuntze.* Open wet woodlands. (Laportea canadensis (*L.*) *Gaud.*)

Pilea pumila (*L.*) *A. Gray.*

Boehmeria cylindrica (*L.*) *Sw.* Swamps. Common.

Parietaria pennsylvanica *Muhl.* Low woods, moist waste places, etc. Common.

Santalaceae R. Br.

Comandra umbellata (*L.*) *Nutt.* Sandy fields and open woods.

Aristolochiaceae Blume

Asarum canadense *L.* Rich woods. Common.

Polygonaceae Desv.

Rumex acetosella *L.* Common everywhere in waste places and fields.

Rumex acetosa *L.* Fields etc. Not common.

Rumex verticillatus *L.* Swamps and shores, often in water.

Rumex altissimus *Wood.* Deep swamps. Rare.

Rumex britannica *L.* Swamps and wet thickets. Common.
Rumex crispus *L.* Common in waste places.
Rumex obtusifolius *L.* A common week in shaded grounds.
Polygonum aviculare *L.*
Polygonum neglectum *Besser.*
Polygonum erectum *L.* This and the two preceding are frequent weeds in waste and cultivated ground.
Polygonum buxiforme *Small.* Forming broad mats on the sandy shore, head of Oneida lake.
Tovara virginiana (*L.*) *Raf.* Woods and thickets. Common.
Persicaria amphibia (*L.*) *S. F. Gray.* Ponds and quiet water. Common. Foliage slimy when fresh (Polygonum fluitans Eaton). In shallow water occurs a form which is Persicaria mesochroa Greene.
Persicaria muhlenbergii (*S. Wats.*) *Small.* Marshy places.
Persicaria pennsylvanica (*L.*) *Small.* Open marshes and wet places.
Persicaria lapathifolium *L.* Low wet places, apparently introduced.
Persicaria persicaria (*L.*) *Small.* Introduced.
Persicaria hydropiperoides (*Michx.*) *Small.*
Persicaria hydropiper (*L.*) *Opiz.* Wet places, apparently introduced.
Persicaria punctata (*Ell.*) *Small.* Swamps.
Fagopyrum fagopyrum (*L.*) *Karst.* Persistent on abandoned fields.
Tracaulon sagittatum (*L.*) *Small.* Wet thickets and low woods.
Tracaulon arifolium (*L.*) *Raf.* Rare.
Bilderdykia convolvulus (*L.*) *Dumortier.* Naturalized along roads and banks. (Polygonum convolvulus *L.*)
Bilderdykia scandens (*L.*) *Lunell.* (Polygonum scandens *L.*)
Polygonella articulata (*L.*) *Meissn.* Sandy fields and pine plains. Common. Reported from here by Gray, Kneiskern and Paine.

Amaranthaceae J. St. Hil.

Amaranthus retroflexus *L.*
Amaranthus hybridus *L.* This and the preceding, both introduced species, are quite common as weeds in waste places and fields.
Amaranthus graecizans *L.* Waste ground and railroad banks. Rare.

Chenopodiaceae Dumort.

Chenopodium album *L.*
Chenopodium botrys *L.* Banks of Fish creek, (Kneiskern).
Chenopodium polyspermum *L.* Brewerton, (S. N. Cowles).
Chenopodium glaucum *L.*

Atriplex hastata *L.* Railroad banks. Rare.
Salsola pestifer *A. Nelson.* Sandy fields. Introduced from the west.

Phytolaccaceae Lindl.

Phytolacca americana *L.* Common.

Corrigiolaceae Reichenb.

Anychia canadensis (*L.*) *B. S. P.* "Pine plains of Rome" (Vasey).
Scleranthus annuus *L.* Sandy fields, banks, etc. Rare.

Aizoaceae A. Br.

Mollugo verticillata *L.* Moist sandy places. Common.

Portulacaceae Reichenb.

Claytonia virginica *L.* Rich woods. Common.
Claytonia caroliniana *Michx.* Woods. North Bay, etc.
Portulaca oleracea *L.* Fields and waste places. Rare.

Alsinaceae Wahl.

Alsine media *L.* A common weed.
Alsine longifolia (*Muhl.*) *Britt.* Damp places in woods and swamps.
Cerastium vulgatum *L.*
Arenaria serpyllifolia *L.* Sandy fields, railroad banks, etc.
Moehringia lateriflora (*L.*) *Fenzl.* Common in woods.
Spergula arvensis *L.* Sandy shores of Oneida lake.

Caryophyllaceae Reichenb.

Agrostemma githago *L.*
Silene antirrhina *L.*
Silene latifolia (*Mill.*) *Britton & Rendle.* (S. inflata *J. E. Smith.*) Sandy fields.
Silene armeria *L.* Roadsides, North Bay.
Lychnis alba *Mill.* & L. dioica *L.* Occasional in grain fields and persistent in sandy fields and roadsides.
Silene dichotoma *Ehrh.* Sandy fields. Rare.
Saponaria officinalis *L.* Common.
Vaccaria vaccaria (*L.*) *Britton.* Meadows etc. Common.

Ceratophyllaceae A. Gray.

Ceratophyllum demersum *L.* Ponds and streams.

Cabombaceae A. Gray.

Brasenia schreberi *Gmel.* "Stagnant pools in Verona," Kneiskern.

Nymphaceae DC.

Nymphaea microphylla *Pers.* (N. kalmiana *Sims*). Shallow water of Oneida lake. Also reported from here by Paine.

Nymphaea rubrodisca (*Morong.*) *Greene* (N. hybrida *Peck*). Fish creek, mouth of Black creek and shallow water of shores of Oneida lake.

Nymphaea americana (*Prov.*) *Miller & Standley* (N. variegata (*Engelm.*) *G. S. Miller*). Common in streams and lakes. (N. advena of Floras, in part).

Castalia odorata (*Dryand.*) *Woodv. & Wood.* Ponds, streams and shallow water of Oneida lake.

Castalia tuberosa (*Paine*) *Greene.* Shallow water near South Bay. "In Oneida lake, where it is abundant near its head a little west of South Bay, in marshes of Dianthera americana and Scirpus lacustris," Paine (type loc.).

Magnoliaceae J. St. Hil.

Liriodendron tulipifera *L.* A common tree in the low woods around Oneida lake. Absent, however, from the shale and limestone formations on the hills to the south.

Ranunculaceae Juss.

Caltha palustris *L.*

Coptis trifolia (*L.*) *Salisb.*

Actaea rubra (*Ait.*) *Willd.*

Actaea alba (*L.*) *Mill.*

Aquilegia canadensis *L.*

Anemone cylindrica *A. Gray.* Sandy woods and clearings about the east end of Oneida lake.

Anemone virginiana *L.*

Anemone canadensis *L.*

Anemone quinquefolia *L.* Moist woodlands. Common.

Hepatica acutiloba *DC.*

Hepatica triloba *Chaix.* More abundant around Oneida lake than the preceding, which is the prevailing species on the hills to the south. Both species are almost entirely absent from the sandy plains east of Oneida lake.

Syndesmon thalictroides (*L.*) *Hoffmg.* Sandy soil in thickets and open woods. Fish Creek Station and North Bay. Not common.
Ranunculus reptans *L.* Moist sand along shore of Oneida lake.
Ranunculus abortivus *L.*
Ranunculus scleratus *L.* Ditches, swamps etc.
Ranunculus purshii *Richards.* In pools and quiet water. The plants mentioned by Paine (cat. p. 54) as R. purshii var. β probably belong here.
Ranunculus recurvatus *Poir.*
Ranunculus acris *L.*
Ranunculus obtusiusculus *Raf.* (R. alismaefolius *A. Gray*). Open grassy swamps and swales, rare.
Ranunculus pennsylvanicus *L. f.* Swamps and wet woods.
Ranunculus septentrionalis *Poir.*
Ranunculus repens *L.* (R. clintoni *Beck*). Wet meadows and swamps.
Batrachium circinatum (*Sibth.*) *Rehb.* Fish creek, Vienna (Kneiskern).
Thalictrum revolutum *DC.* Wet meadows.
Thalictrum dioicum *L.*
Thalictrum polygamum *Muhl.* The common species in woods and low meadows, conspicuous in July and August.
Clematis virginiana *L.*

Berberidaceae Desv.

Caulophyllum thalictroides (*L.*) *Michx.*
Podophyllum peltatum *L.*

Menispermaceae DC.

Menispermum canadense *L.* Low thickets and woods, especially along streams.

Lauraceae Lindl.

Sassafras sassafras (*L.*) *Karst.* Common in woods and thickets, forming an important part of the second growth in damp places on the burned over portions of the pine plains.
Bensoin aestivale (*L.*) *Nees.* Swamps and low woods. Common.

Papaveraceae B. Juss.

Sanguinaria canadensis *L.*

Fumariaceae DC.

Bicuculla cucullaria (*L.*) *Millsp.*
Bicuculla canadensis (*Goldie*) *Millsp.*

Cruciferae B. Juss.

Draba verna *L.* Sandy fields.
Bursa bursa-pastoris (*L.*) *Britt.*
Radicula sylvestris (*L.*) *Druce.*
Radicula palustris (*L.*) *Moench.*
Neobeckia aquatica (*Eaton*) *Britton* (Nasturtium lacustre *Gray*). In streams flowing into Oneida lake. First found here in 1831 by Dr. Asa Gray.
Norta altissima (*L.*) *Britt.*
Sisymbrium nasturtium-aquaticum *L.*
Lepidium campestre (*L.*) *R. Br.*
Lepidium virginicum *L.*
Cheirinia cheiranthoides (*L.*) *Link.*
Erysimium officinale *L.*
Arabidopsis thaliana (*L.*) *Britton.* Sandy fields.
Arabis glabra (*L.*) *Bernh.* Fields and waste places.
Arabis drummondii *A. Gray.* "At Humaston's a few miles east of Sylvan Beach" (Vasey).
Barbarea barbarea (*L.*) *MacM.*
Barbarea rivularis *Martr.* (B. stricta in recent floras). Frequent and seemingly native along the lake shore.
Cardamine pennsylvanica *Muhl.*
Cardamine pratensis *L.*
Cardamine bulbosa (*Schreb.*) *B. S. P.* Wet meadows and thickets.
Cardamine hirsuta *L.*
Dentaria laciniata *Muhl.*
Dentaria diphylla *Michx.*
Sinapis arvensis *L.*
Brassica nigra (*L.*) *Koch.*

Capparidaceae Lindl.

Polanisia graveolens *Raf.* "Shore of Oneida lake near Constantia" (Vasey).

Sarraceniaceae La Pyl.

Sarracenia purpurea *L.* Mossy or sphagnous places.
Drosera rotundifolia *L.* Mossy swamps and bogs.

Penthoraceae Rydb.

Penthorum sedoides *L.* Ditches, low meadows and swamps.

Saxifragaceae Desv.

Micranthes pennsylvanica (*L.*) *Haw.* (Saxifraga pennsylvanica *L.*). Open swamps and wet woods.
Tiarella cordifolia *L.*
Mitella dyphylla *L.*
Mitella nuda *L.* Mossy thickets north of the lake.
Chrysoplenium americanum *Schw.* Wet places in woods.

Hamamelidaceae Lindl.

Hamamelis virginiana *L.*

Grossulariaceae Dumort.

Ribes americanum *Mill.* Swampy places.
Ribes glandulosum *Grauer.* (R. prostratum *L'Her.*) Mossy thickets, in the sand plains. Rare.
Ribes americanum *Mill.* (R. floridum *L'Her.*) Low woods near North Bay.

Platanaceae Lindl.

Platanus occidentalis *L.* A large tree commonest along streams.

Rosaceae B. Juss.

Spiraea latifolia (*Ait.*) *Borkh.* Open marshes and swamps.
Spiraea tomentosa *L.* In similar situations, also on sandy plains.
Spiraea alba *DuRoi.*
Filipendula rubra (*Hill*) *Robinson.* Roadside near West Vienna.
Dalibarda repens *L.* Moist rich woods.
Potentilla simplex *Michx.*
Potentilla canadensis *L.*
Potentilla monspeliensis *L.*
Potentilla argentea *L.*
Potentilla recta *L.* Rare.
Argentina anserina (*L.*) *Rydb.* Lake shores. Common. A form of this described as Argentina babcockiana Rydberg, is reported by Rydberg from the shores of Oneida lake.
Comarum palustre *L.* Marshes and shallow water along slow streams. Common, forming a large percentage of the vegetation bordering Black creek.
Fragaria virginiana *Duchesne.*
Fragaria americana (*Porter*) *Britton.* North Bay.
Fragaria canadensis *Michx.* Sandy fields. Common.

Agrimonia gryposepala *Wallr.* (A. hirsuta (*Muhl.*) *Bicknell*).
Agrimonia striata *Michx.*
Geum virginianum *L.*
Geum canadense *Jacq.*
Geum strictum *Ait.*
Geum rivale *L.*
Rubus odoratus *L.*
Rubus strigosus *Michx.* Sandy soil in thickets.
Rubus occidentalis *L.*
Rubus triflorus *Richards.* (R. americanus (*Mx.*) *Britt.*) Mossy swamps and bogs.
Rubus canadensis *L.* Woods and thickets.
Rubus procumbens *Muhl.* (R. villosa *Ait.*) Common, everywhere.
Rubus hispidus *L.* Rare.
Rosa carolina *L.* Frequent in swamps.
Rosa virginiana *Mill.* (R. lucida *Ehrh.*). Sandy thickets and open woods.

Malaceae Small.

Sorbus americana *Marsh.* Moist woods east of Verona Beach.
Malus malus (*L.*) *Britt.*
Malus glaucescens *Rehder.* (M. coronaria *Auth.*) Woods and thickets along the north shore of Oneida lake.
Aronia melanocarpa (*Michx.*) *Britt.* Leaves glabrous beneath and more abundant everywhere than the following.
Aronia arbutifolia (*L.*) *Lf.*
Amelanchier canadensis (*L.*) *Medic.* (A. botryapium (*L. f.*) *DC.*) Common in woodlands.
Amelanchier laevis *Wiegand.* Hillsides and rich woods. North Bay.
Amelanchier intermedia *Spach.* Thickets and wet woods.
Amelanchier spicata (*Lam.*) *C. Koch.* A low shrub of the sand plains.
Crataegus punctata *Jacq.*
Crataegus lobulata *Sarg.* South Bay (Harberer).
Crataegus albicans *Ashe.* South Bay (Harberer as C. polita *Sarg.*).
Crataegus strecterae *Sarg.* Lewis point (Harberer).

Amygdalaceae Reichb.

Prunus nigra *Ait.*
Prunus pennsylvanica *L. f.*
Padus nana (*Du Roi*) *Roemer.* Choke cherry. (P. virginiana of earlier reports).

Padus virginiana (*L.*) *Mill.* (P. serotina *Ehrh.*) Wild black cherry. Common.

Fabaceae Reichenb.

Robinia pseudo-acacia *L.* Planted for ornament and established in places.

Robinia viscosa *Vent.* Well established along a roadside and throughout an open wood, near North Bay. In bloom June 19, 1915.

Lupinus perennis *L.* Common in sandy fields.

Medicago lupulina *L.*

Medicago sativa *L.*

Melilotus alba *Desv.*

Melilotus officinalis (*L.*) *Lam.*

Trifolium procumbeus *L.* Sandy woods, thickets etc.

Trifolium arvense *L.* Common in sandy fields.

Trifolium pratense *L.*

Trifolium hybridum *L.*

Trifolium repens *L.*

Meibomia nudiflora (*L.*) *Kuntze.*

Meibomia grandiflora (*Walt.*) *Kuntze.*

Meibomia michauxii *Vail.* (Desmodium rotundifolium *DC.*) Sandy woods and thickets. "Reported from pine plains of Rome" by Kneiskern.

Meibomia paniculata (*L.*) *Kuntze.*

Meibomia dillenii (*Darl.*) *Kuntze.*

Meibomia canadensis (*L.*) *Kuntze.*

Meibomia obtusa (*Muhl.*) *Vail.* (Desmodium ciliare *DC.*) "Pine plains of Rome" (Kneiskern).

Lespedeza frutescens (*L.*) *Britton.* Sandy fields.

Lespedeza hirta (*L.*) *Hornem.* More abundant than the following.

Lespedeza capitata *Michx.*

Vicia cracca *L.*

Vicia americana *Muhl.*

Vicia tetrasperma (*L.*) *Moench.*

Lathyrus maritimus (*L.*) *Bigel.* var. glaber (*Seringe*) *Eames.* Sandy woods along east end of Oneida lake north of Sylvan Beach.

Lathyrus myrtifolius *Muhl.* Common in marshes and moist thickets. Collected by C. H. Peck at South Bay and by H. D. House at various places around the east and north shores of the lake.

Lathyrus latifolius *L.* Established along a roadside near Constantia.

Glycine apios *L.* (Apios tuberosa *Moench.*) Moist thickets and woods.
Falcata comosa (*L.*) *Kuntze.*

Geraniaceae J. St. Hil.

Robertiella robertiana (*L.*) *Hanks.* (Geranium robertianum *L.*) Rich wood, North bay. Not common in the sand plain region.
Geranium maculatum *L.* Common.
Geranium bicknellii *Britton.* Sandy fields near South Bay.
Geranium pusillum *L.* Waste places and fields. Reported from near Constantia by Vasey.
Erodium cicutarium (*L.*) *L'Her.* Reported from near Constantia. and from an island in Oneida lake opposite Constantia, by Vasey.

Oxalidaceae Lindl.

Oxalis acetosella *L.* Damp or moist woods. Common.
Xanthoxalis stricta (*L.*) *Small.* Common.
Xanthoxalis rufa *Small.* Sandy fields and dry woods.

Linaceae Dumort.

Linum usilatissimum *L.* Adventive along a railroad near Sylvan Beach.
Cathartolinum virginianum (*L.*) *Reichenb.* (Linum virginianum *L.*) Sandy fields, open woods and thickets.

Balsaminaceae Lindl.

Impatiens biflora *Walt.*
Impatiens pallida *Nutt.*

Limnanthaceae Lindl.

Floerka proserpinacoides *Willd.*

Polygalaceae Desv.

Polygala verticillata *L.*
Polygala viridescens *L.*
Polygala pauciflora *Willd.* Woods and thickets. North Bay. H. D. House, *No. 5885*, June 25, 1915. Also reported from pine plains of Rome by Vasey.
Polygala polygama *Walt.* Reported from pine plains west of Rome by Vasey. One mile north of New London by Kneiskern. Oneida lake, Gray.

Euphorbiaceae J. St. Hil.

Acalypha virginica *L.*
Chamaesyce maculata (*L.*) *Small.*
Chamaesyce preslii (*Guss.*) *Arthur.*
Chamaesyce rafinesqui (*Greene*) *Small.*
Tithymalus cyparissias (*L.*) *Hill.*

Callitrichaceae Lindl.

Callitriche palustris *L.*
Callitriche heterophylla *Pursh.*

Anarcardiaceae Lindl.

Rhus copallina *L.*
Rhus hirta (*L.*) *Sudw.*
Rhus glabra *L.*
Toxicodendron vernix (*L.*) *Kuntze.*
Toxicodendron radicans (*L.*) *Kuntze.*

Ilicaceae Lowe.

Ilex verticillata (*L.*) *A. Gray.* A very abundant shrub in open swamps and along streams. The form with leaves pubescent beneath (variety padifolia) is also frequent.

Nemopanthus mucronata (*L.*) *Trelease.* Abundant in open swamps and marshes.

Celastraceae Lindl.

Celastrus scandens *L.* Thickets, especially near streams.

Aceraceae J. St. Hil.

Acer saccharinum *L.* The soft or silver maple, one of the most abundant trees of the low wet deciduous woodlands around the head of the lake.

Acer rubrum *L.* Common in low woods and swamps.

Acer saccharum *Marsh.* Not common in the low woods around the head of Oneida lake.

Acer pennsylvanicum *L.* Low woods and swamps.

Acer spicatum *Lam.* Swamps. Not common.

Rhamnaceae Desv.

Rhamnus alnifolia *L'Her.* Swamps and boggy thickets. Not common.

Vitaceae Lindl.

Vitis labrusca *L.*
Vitis aestivalis *Michx.*
Parthenocissus quinquefolia (*L.*) *Planch.*

Tiliaceae Juss.

Tilia americana *L.* Frequent in low, moist woodlands.

Malvaceae Neck.

Malva rotundifolia *L.* Yards and roadsides, South Bay.
Malva moschata *L.* Roadsides near North Bay.

Hypericaceae Lindl.

Hypericum ellipticum *Hook.* Swamps, marshy meadows and sandy depressions.
Hypericum perforatum *L.* A common weed.
Hypericum punctatum *Lam.* Common in moist soil.
Hypericum mutilum *L.* Common in moist soil.
Hypericum boreale (*Britton*) *Bicknell.* Marshy places. Rare.
Hypericum majus (*Gray*) *Britton.* Marshes and wet depressions in the sand plains.
Hypericum canadense *L.* Common.
Sarothra gentianoides *L.* Sandy soil. Common.
Triadenum virginicum (*L.*) *Raf.* Swamps, marshes and borders of ponds and lakes. Common.

Elatinaceae Lindl.

Elatine americana (*Pursh.*) *Arn.* Rare.

Cistaceae Lindl.

Crocanthemum canadense (*L.*) *Britton.* (Helianthemum canadense *Michx.*) Sandy fields and woods. Common.
Lechea intermedia *Leggett.* Sandy fields.

Violaceae DC.

Viola sororia *Willd.* Rare in the sandy region but common at North bay.
Viola affinis *LeConte.* Low woods and swamps.
Viola cucullata *Ait.* Swampy woods and marshes.

Viola fimbriatula *J. E. Sm.* Sandy fields. Common. A hybrid with V. s o r o r i a is common near Verona Beach.
Viola porteriana *Pollard* (V. cucullata x fimbriatula).
Viola incognita *Brainerd.* Common in rich damp woods.
Viola blanda *Willd.* Rich woods.
Viola pallens (*Banks*) *Brainerd.* Bogs and wet mossy places. Common.
Viola eriocarpa *Schw.* Sandy woods. Common.
Viola pubescens *Ait.*
Viola canadensis *L.*
Viola conspersa *Reichenb.*
Viola subvestita *Greene.* Sandy fields. Rare.

Daphnaceae Desv. (Thymeleaceae Reichenb.)

Dirca palustris *L.* Moist woods and thickets. Not common.

Salicariaceae Desv. (Lythraceae Lindl.)

Decodon verticillatus (*L.*) *Ell.* Common in swamps and along slow streams in shallow water and shores of Oneida lake.
Lythrum alatum *Pursh.* Open marshes. Rare.
Lythrum salicaria *L.* Lake shore north of Sylvan Beach.

Melastomaceae R. Br.

Rhexia virginica *L.* Low meadows north of Sylvan Beach. Reported from this region by Vasey and by Kneiskern.

Epilobiaceae Vent.

(Oenotheraceae *Desv.*, Onagraceae *Dumort.*)

Isnardia palustris *L.* Sandy shores. Common.
Chamaenerion angustifolium (*L.*) *Scop.* Very abundant on the burned over portions of the sand plains, and elsewhere in waste places.
Epilobium lineare *Muhl.* Swamps and boggy depressions.
Epilobium coloratum *Muhl.* Common in low ground.
Epilobium adenocaulon *Haussk.* Common.
Oenothera biennis *L.*
Oenothera muricata *L.* Sandy fields. Common.
Kneiffia pumila (*L.*) *Spach.*
Circaea latifolia *Hill.* (C. lutetiana).
Circaea alpina *L.* Wet woods and swamps.

Haloragidaceae Kl. & Garcke

Myriophyllum verticillatum *L.* In quiet water. Common.

Araliaceae Vent.

Aralia racemosa *L.*
Aralia nudicaulis *L.*
Aralia hispida *Vent.* Sandy woods and plains. Common.

Ammiaceae Presl.

Sanicula marylandica *L.* North Bay.
Sanicula canadensis *L.* Common.
Daucus corota *L.*
Washingtonia claytoni (*Michx.*) *Britton.*
Washingtonia longistylis (*Torr.*) *Britton.*
Deringa canadensis (*L.*) *Kuntze.*
Pastinaca sativa *L.*
Heracleum lanatum *Michx.*
Conioselinum chinense (*L.*) *B. S. P.* Swamps and swampy woods. Not rare.
Angelica atropurpurea *L.*
Thaspium barbinode (*Michx.*) *Nutt.*
Taenidia integerrima (*L.*) *Drude.* "Gravelly borders of Oneida lake," Kneiskern.
Zizzia aurea (*L.*) *Koch.*
Hydrocotyle americana *L.*
Conium maculatum *L.*
Sium cicutaefolium *Schrank.*
Cicuta maculata *L.*
Cicuta bulbifera *L.*
Carum carui *L.*

Cornaceae Link.

Cornus rugosa *Lam.* (C. circinata *L'Her.*) Edge of woods and in moist thickets.
Cornus amomum *Mill.*
Cornus stolonifera *Michx.*
Cornus femina *Mill.* (C. candissima *Marsh.*, C. paniculata *L'Her.*) Very common in marshy places.
Cornus alternifolia *L. f.* Open woods and plains. Common.
Cornus canadensis *L.* "Dwarf Cornel." (Chamaepericlymenum canadense *Asch. & Graebr.*) Common.
Cornus florida *L.* (Cynoxylon floridum *Raf.*) North Bay.
Nyssa sylvatica *Marsh.* A common tree in the deep swamps.

Pyrolaceae Agardh.

Pyrola americana *Sweet*. Rich woods, Fish Creek Station, North Bay, etc. Rare.

Pyrola elliptica *Nutt*. Rich woods. Common.

Pyrola secunda *L*. Woods and thickets. Not rare. The variety pumila *Paine*, with broader and blunter leaves is occasionally found.

Chimaphila corymbosa *Pursh* (C. umbellata *Nutt*.) Dry or rich woods. Common.

Monotropaceae Desv.

Monotropa uniflora *L*. Moist rich woods. Common.

Ericaceae DC.

Ledum groenlandicum *Oeder*. Marshy places in the pine plains.

Azalea nudiflora *L*. Edge of woods and open swamps.

Kalmia angustifolia *L*. Sandy fields and open woods.

Chamaedaphne calyculata (*L*.) *Moench*. Marshy places. Common.

Xolisma ligustrina (*L*.) *Britton*. (Andromeda ligustrina *Muhl*.) Dry woods.

Epigaea repens *L*. Open woods.

Gautheria procumbens *L*. Common.

Arctoslaphylos uva-ursi (*L*.) *Spreng*. Reported from " near Oneida lake " by Gray.

Vacciniaceae Lindl.

Gaylyssacia baccata (*Wang*.) *K. Koch*. (G. resinosa *T. & G*.)

Polycodium stamineum (*L*.) *Greene*.

Vaccinium corymbosum *L*. Swamps. Common.

Vaccinium canadense *Kalm*. Open woods and thickets.

Vaccinium angustifolium *Ait*. (V. pennsylvanicum *Lam*.) Very abundant in sandy woods.

Vaccinium vacillans *Kalm*.

Vaccinium atrococcum (*A. Gray*) *Heller*. Moist thickets.

Oxycoccus macrocarpus (*Ait*.) *Pursh*. Bogs and open wet mossy places.

Chiogenes hispidula (*L*.) *T. & G*. Rare.

Primulaceae Vent.

Samolus floribundus *H. B. K*.

Lysimachia quadrifolia *L*.

Lysimachia producta (*A. Gray*) *Fernald*. Seemingly a hybrid between the preceding and the following species.

Lysimachia terrestris (*L.*) *B. S. P.*
Lysimachia nummularia *L.*
Steironema ciliatum (*L.*) *Raf.*
Steironema lanceolatum (*Walt.*) *A. Gray.* Collected by Peck.
Naumbergia thrysiflora (*L.*) *Duby*
Trientalis americana *Pursh.*

Jasminaceae Desv. (Oleaceae Lindl.)

Syringa vulgaris *L.* Persistent and spreading near North Bay.
Fraxinus americana *L.*
Fraxinus pennsylvanica *Marsh.*
Fraxinus nigra *Marsh.*

Gentianaceae Desv.

Gentian crinita *Froel.*
Gentian quinquefolia *L.*
Dasystephana saponaria (*L.*) *Small.*
Dasystephana andrewsii (*Griseb.*) *Small.*
Halenia deflexa (*J. E. Sm.*) *Griseb.* Rare.
Bartonia virginica (*L.*) *B. S. P.*

Menyanthaceae G. Don.

Menyanthes trifoliata *L.*

Apocynacea Desv.

Vinca minor *L.* Roadsides and woods. North Bay.
Apocynum androsaemifolium *L.*
Apocynum sibiricum *Jacq.* (A. hypericifolium *Ait.*)

Asclepiadaceae Lindl.

Asclepias tuberosa *L.* Dry fields. Not rare. Reported from this region by Kneiskern.
Asclepias incarnata *L.*
Asclepias pulchra *Ehrh.*
Asclepias amplexicaulis *J. E. Sm.*
Asclepias exaltata (*L.*) *Muhl.*
Asclepias quadrifolia *Jacq.*
Asclepias syriaca *L.*

Convolvulaceae Vent.

Ipomoea purpurea (*L.*) *Lam.* Cultivated and sometimes persistent.
Ipomoea hederacea *Jacq.* Sometimes escaped from cultivation.
Convolvulus sepium *L.*

Convolvulus arvensis *L.* Along a railroad embankment.
Convolvulus spithamaeus *L.* "Plains of Rome" (Kneiskern). Common north of the lake in Oswego county.

Cuscutaceae Durmort.

Cuscuta gronovii *Willd.*

Polemoniaceae DC.

Phlox maculata *L.* Near Oneida Valley.
Phlox paniculata *L.* North Bay.

Hydrophyllaceae Lindl.

Hydrophyllum virginianum *L.*
Hydrophyllum canadense *L.* Rather rare, except in deep, cool woods near North Bay.

Boraginaceae Lindl.

Cynoglossum officinale *L.*
Lappula virginiana (*L.*) *Greene.*
Mertensia virginica (*L.*) *DC.*
Myosotis laxa *Lehm.* Collected by Peck.
Myosotis virginica (*L.*) *B. S. P.*
Myosotis scorpioides *L.*
Lithospermum arvense *L.*
Lithospermum officinale *L.*
Mertensia virginica (*L.*) *DC.* "Banks of Oneida and Fish creeks" (Kneiskern). Formerly abundant along Oneida creek south toward Oneida, but not seen recently.
Onosmodium hispidissimum *Mackenzie.*
Symphytum officinale *L.*
Echium vulgare *L.*

Verbenaceae J. St. Hil.

Verbena urticifolia *L.*
Verbena hastata *L.* Dwarf forms only a few inches high are common along the lake shore.

Labiatae B. Juss.

Trichostema dichotomum *L.*
Teucrium canadense *L.*
Teucrium occidentale *A. Gray* (T. boreale *Bicknell*).
Scutellaria lateriflora *L.*

Scutellaria galericulata *L.*
Nepeta cataria *L.*
Glecoma hederacea *L.*
Prunella vulgaris *L.*
Galeopsis tetrahit *L.*
Leonurus cardiaca *L.*
Lamium amplexicaule *L.*
Stachys aspera *Michx.*
Monarda didyma *L.*
Monarda fistulosa *L.*
Blephilia ciliata (*L.*) *Raf.*
Hedeoma pulegioides (*L.*) *Pers.*
Clinopodium vulgare *L.*
Koellia virginiana (*L.*) *MacM.*
Koellia incana (*L.*) *Kuntze*
Lycopus virginicus *L.*
Lycopus uniflorus *Michx.*
Lycopus americanus *Muhl.*
Mentha spicata *L.*
Mentha canadensis *L.*
Collinsonia canadensis *L.*

Solanaceae Pers.

Physalis virginiana *Mill.*
Physalis heterophylla *Nees.*
Solanum nigrum *L.*
Solanum dulcamara *L.*
Datura stramonium *L.*

Scrophulariaceae Lindl.

Verbascum thapsus *L.* At Sylvan Beach is a hybrid with V. lychnitis *L.*
Verbascum lychnitis *L.* Dry sandy fields near Sylvan Beach.
Verbascum blattaria *L.*
Linaria linaria (*L.*) *Karst.* (L. vulgaris *Hill*).
Linaria canadensis (*L.*) *Dumort.*
Scrophularia leporella *Bicknell.* Along railroad north of Sylvan Beach and evidently introduced there.
Chelone glabra *L.*
Pentstemon pentstemon (*L.*) *Britton.* (P. laevigatus *Soland*).
Mimulus ringens *L.*
Gratiola virginiana *L.*
Gratiola aurea *Muhl.* Rare.

Ilysanthes dubia (*L.*) *Barnhart.*
Veronica americana *Schw.*
Veronica scutellata *L.*
Veronica officinalis *L.*
Veronica serpyllifolia *L.*
Veronica peregrina *L.*
Veronica arvensis *L.*
Aureolaria virginica (*L.*) *Pennell.* Paine reports this from Oneida lake on the authority of Gray, under the name of Gerardia quercifolia. He also reports Gerardia flava, now called Aureolaria villosa (*Muhl.*) *Raf.* on the authority of Kneiskern. Both of these need confirmation.
Agalinis tenuifolia (*Vahl.*) *Raf.*
Pedicularis canadensis *L.*
Melampyrum lineare *Lam.*
Castilleja coccinea (*L.*) *Spreng.* "Oneida lake," Gray.

Lentibulariaceae Lindl.

Utricularia macorrhiza *LeConte.*
Stomoisia cornuta (*Michx.*) *Raf.* Sphagnous depressions in the sand plains. Rare.

Orobanchaceae Lindl.

Conopholis americana (*L. f.*) *Wallr.* Common under oak trees.
Leptamnium virginianum (*L.*) *Raf.* Oak woods, not common.

Acanthaceae J. St. Hil.

Dianthera americana *L.* Shallow water of lake shore and of streams flowing into the lake.

Phrymaceae Schauer in DC.

Phryma leptostachya *L.*

Plantaginaceae Lindl.

Plantago major *L.*
Plantago rugellii *Decne.* Lake shores and moist places.
Plantago lanceolata *L.*
Plantago aristata *Michx.* Sandy fields. Introduced.

Rubiaceae B. Juss.

Cephalanthus occidentalis *L.* Swamps and shallow water, often forming dense thickets.

Mitchella repens *L.*
Galium pilosum *Ait.* Sandy fields, and open woods.
Galium circaezans *Michx.* Dry woods.
Galium boreale *L.* North shore of Oneida lake.
Galium lanceolatum *Torr.* Moist or dry woods.
Galium triflorum *Michx.* Woods and moist thickets. Common.
Galium trifidum *L.* Mossy and swampy places. Common.
Galium claytoni *Michx.* Mossy swamps and depressions.
Galium palustre *L.* Moist places, thickets and swamps.
Galium asprellum *Michx.* Thickets and woods. Common.

Caprifoliaceae Vent.

Sambucus canadensis *L.*
Sambucus racemosa *L.* (S. pubens *Michx.*)
Viburnum alnifolium *Marsh.*
Viburnum opulus *L.* Low woods and swamps. Not common.
Viburnum acerifolium *L.*
Viburnum dentatum *L.* Swamps and low woods. Common.
Viburnum lentago *L.*
Viburnum cassinoides *L.* Swamps and marshes. Common.
Lonicera dioica *L.*
Lonicera tartarica *L.* Escaped or persistent around North Bay.

Cucurbitaceae B. Juss.

Micrampelis lobata (*Michx.*) *Greene.* Along Fish creek in moist thickets, also along Oneida creek.
Sicyos angulatus *L.* Stream banks and moist thickets. Common.

Campanulaceae Juss.

Campanula rapunculoides *L.*
Campanula aparinoides *Pursh.* Swamps and marshes. Not common.
Specularia perfoliata (*L.*) *A. DC.* Dry sandy fields and open woods. Common.

Lobeliaceae Dumort.

Lobelia cardinalis *L.* Low meadows and marshes. Common.
Lobelia syphilitica *L.* Moist soil. Common.
Lobelia spicata *Lam.* (L. claytoniana *Michx.*, L. goodenioides *Willd.*) Dry sandy soil in fields and open woods.
Lobelia inflata *L.* Dry soil, fields and woods. Common.

Cichoriaceae Reichenb.

Cichorium intybus *L.* Roadsides, along railroads, etc.
Krigia virginica (*L.*) *Willd.* Sandy fields. Common.
Tragopogon pratensis *L.*
Leontodon taraxacum *L.*
Leontodon erythrosperum (*Andrz.*) *Britton.*
Sonchus oleraceus *L.*
Sonchus arvensis *L.*
Lactuca virosa *L.*
Lactuca hirsuta *Muhl.*
Lactuca spicata (*Lam.*) *Hitchc.*
Lactuca canadensis *L.*
Hieracium canadense *Michx.*
Hieracium paniculatum *L.*
Hieracium scabrum *Michx.*
Hieracium venosum *L.*
Hieracium florentinum *All.*
Hieracium aurantiacum *L.*
Nabulus altissimus (*L.*) *Hook.*
Nabulus trifoliatus *Cass.*
Nabulus serpentarius (*Pursh*) *Hook.*

Ambrosiaceae Reichenb.

Ambrosia trifida *L.*
Ambrosia elatior *L.* (A. artemisiaefolia *L.*)
Xanthium commune *Britton.*
Xanthium americanum *Walt.*

Compositae Adans.

Eupatorium maculatum *L.*
Eupatorium purpureum *L.*
Eupatorium perfoliatum *L.*
Eupatorium urticaefolium *Reichard.* (E. ageratoides *L. f.*)
Mikania scandens (*L.*) *Willd.* Marshes and swamps, climbing over shrubs and herbs.
Solidago caesia *L.*
Solidago flexicaulis *L.*
Solidago bicolor *L.*
Solidago hispida *Muhl.*
Solidago ulignosa *Nutt.*
Solidago odora *Ait.*

Solidago rugosa *Mill.*
Solidago neglecta *T. & G.* In sphagnous depressions of sand plains.
Solidago juncea *Ait.*
Solidago canadensis *L.*
Solidago serotina *Ait.*
Solidago nemoralis *Ait.*
Euthamia graminifolia (*L.*) *Nutt.*
Sericocarpus asteroides (*L.*) *B. S. P.*
Aster divaricatus *L.*
Aster macrophyllus *L.*
Aster multiformis *Burgess.* In the pine woods near North Bay a form is abundant which corresponds to the description of Aster securiformis Burgess.
Aster cordifolius *L.*
Aster undulatus *L.*
Aster patens *Ait.*
Aster novae-angliae *L.*
Aster puniceus *L.*
Aster tardiflorus *L.*
Aster prenanthoides *Muhl.*
Aster laevis *L.*
Aster concinnus *Willd.*
Aster lateriflorus (*L.*) *Britton* (A. miser *Nutt.*, A. diffusus *Ait.*)
Aster hirsuticaulis *Lindl.*
Aster ericoides *L.*
Aster multiflorus *Ait.*
Aster salicifolius *Lam.*
Aster paniculatus *Lam.*
Aster tradescanti *L.*
Aster acuminatus *Michx.*
Erigeron pulchellus *Michx.*
Erigeron philadelphicus *L.*
Erigeron annuus (*L.*) *Pers.*
Erigeron ramosus (*Walt.*) *B. S. P.*
Leptilon canadense (*L.*) *Britton* (Erigeron canadense *L.*)
Doellingeria umbellata (*Mill.*) *Nees.*
Ionactis linariifolius (*L.*) *Greene.*
Antennaria plantaginifolia (*L.*) *Richards.*
Antennaria neodioica *Greene.*
Antennaria neglecta *Greene.*
Antennaria grandis (*Fernald*) *House.*
Antennaria fallax *Greene.*

Anaphalis margaritacea (*L.*) *Benth. & Hook.*
Gnaphalium obtusifolium *L.*
Gnaphalium uliginosum *L.*
Inula helenium *L.*
Rudbeckia hirta *L.*
Rudbeckia laciniata *L.*
Helianthus tuberosus *L.*
Helianthus divaricatus *L.*
Helianthus decapetalus *L.*
Helianthus strumosus *L.*
Bidens cernua *L.*
Bidens connata *Muhl.*
Bidens frondosa *L.*
Bidens vulgata *Greene.*
Bidens bipinnata *L.*
Galinsoga parviflora *Cav.*
Helenium autumnale *L.*
Achillea millefolium *L.*
Anthemis cotula *L.*
Chrysanthemum leucanthemum *L.*
Tanacetum vulgare *L.* Common near North Bay.
Artemisia canadensis *Michx.* Shores of lakes, Oneida county, Kneiskern.
Artemisia vulgaris *L.*
Artemisia stelleriana *Bess.* In sand along shore of Oneida lake north of Sylvan Beach.
Tussilago farfara *L.*
Erechtites hieracifolia (*L.*) *Raf.*
Senecio aureus *L.*
Arctium minus *Schk.*
Cirsium lanceolatum (*L.*) *Hil.*
Cirsium arvense (*L.*) *Scop.*
Cirsium muticum *Michx.* Common in swamps.
Carduus crispus *L.*

FUNGI OF CHAUTAUQUA COUNTY, N. Y.

DAVID R. SUMSTINE

The following list of fungi is based on collections made by the writer in June 1908, in July 1911 and in July 1916. The principal collecting stations were the following: Mayville, Chautauqua, Bemus Point, Jamestown, Panama and Sherman.

The specimens have been placed in the herbarium of the Carnegie Museum, Pittsburgh, Pa.

MYXOMYCETES

Arcyria cinerea (*Bull.*) *Pers.*
Arcyria denudata (*L.*) *Sheldon*
Arcyria ferruginea *Saut.*
Arcyria nutans (*Bull.*) *Grev.*
Ceratiomyxa fructiculosa (*Muell.*) *Macbr.*
Ceratiomyxa porioides (*A. & S.*) *Schroet.*
Diachea leucopoda (*Bull.*) *Rost.*
Fuligo ovata (*Schaeff.*) *Macbr.*
Hemitrichia serpula (*Scop.*) *Rost.*
Lachnobolus globosus (*Schw.*) *Rost.*
Lycogala epidendrum (*Buxb.*) *Fr.*
Stemonitis morgani *Peck*
Tubifera ferruginosa (*Batsch*) *Macbr.*

CHYTRIDIALES

Synchytriaceae

Synchytrium decipiens *Farl.* On Falcata comosa (*L.*) *Kuntze*

PERONOSPORALES

Albuginaceae

Albugo bliti (*Biv.*) *Kuntze.* On Amaranthus retroflexus *L.*
Albugo candida (*Pers.*) *Kuntze.* On Arabis lyrata *L.*
Albugo tragopogonis (*Pers.*) *S. F. Gray.* On Ambrosia artemisiaefolia *L.*

Peronosporaceae

Peronospora alta *Fckl.* On Plantago major *L.*
Plasmopara viticola (*B. & C.*) *Berl. & DeToni.* On Vitis *sp.*
Plasmopara geranii (*Peck*) *Berl. & DeToni.* On Geranium maculatum *L.*

MUCORALES

Mucoraceae

Syzygites aspergillus (*Scop.*) *Pound.* On different species of Agarics.

EXOASCALES

Exoascaceae

Exoascus deformans (*Berk.*) *Fckl.* On peach leaves

HELVELLALES

Geoglossaceae

Microglossum rufum (*Schw.*) *Underw.*

PEZIZALES

Pezizaceae

Lachnea scutellata (*L.*) *Sacc.*
Peziza nebulosa *Cooke*
Peziza dehnii *Rabh.*

Helotiaceae

Chlorosplenium aeruginosum (*Oed.*) *De Not.*
Sarcoscypha floccosa (*Schw.*) *Sacc.*
Sarcoscypha occidentalis (*Schw.*) *Cooke*

Cenangiaceae

Bulgaria rufa *Schw.*

PHACIDIALES

Phacidiaceae

Clithris quercina (*Pers.*) *Rehm.*

HYSTERIALES

Hysteriaceae

Glonium stellatum *Muhl.*

HYPOCREALES

Hypocreaceae

Chromocrea gelatinosa (*Tode*) *Seaver*
Hypomyces chrysospermus (*Bull.*) *Tul.*
Hypomyces hyalinus (*Schw.*) *Tul.*
Hypomyces lactifluorum (*Schw.*) *Tul.*

PERISPORIALES

Erysiphaceae

Erysiphe cichoracearum *DC.* On Aster sp.
Erysiphe communis (*Wallr.*) *Link.* On Ranunculus acris *L.*
Microsphaera alni (*DC.*) *Wint.* On Syringa vulgaris *L.*
Sphaerotheca castagnei *Lev.* On Leontodon taraxacum *L.*
Sphaerotheca mors-uvae (*Schw.*) *B. & C.* On Geranium maculatum *L.*

SPHAERIALES

Diatrypaceae

Diatrypella quercina (*Pers.*) *Nits.*

Valsaceae

Diaporthe parasitica *Murrill.* On Castanea dentata (*Marsh.*) *Borkh.*

Xylariaceae

Daldinia concentrica (*Bolt.*) *Ces. & De Not.*
Hypoxylon coccineum *Bull.* With Institale acariforme *Fr.*
Ustulina vulgaris *Tul.*
Xylaria corniformis *Fr.*
Xylaria polymorpha (*Pers.*) *Grev.*

USTILAGINALES

Ustilaginaceae

Ustilago avenae (*Pers.*) *Jens.* On oats.

Tilletiaceae

Urocystis carcinodes (*B. & C.*) *Fish.* On Cimicifuga racemosa *Nutt.*

UREDINALES

Melampsoraceae

Melampsora farinosa (*Pers.*) *Schroet.* On Salix sp.
Coleosporium sonchi-arvensis (*Pers.*) *Wint.* On Aster sp.

Pucciniaceae

Gymnoconia interstitiales (*Schlecht.*) *Lagerh.* On various species of Rubus
Phragmidium potentillae *Wint.* On Potentilla canadensis *L.*
Puccinia anemones-virginianae *Schw.* On Anemone virginiana *L.*
Puccinia asteris *Duby.* On leaves of Asters
Puccinia circaeae *Pers.* On Circaea lutetiana *L.*
Puccinia dayi *Clinton.* On Steironema ciliatum (*L.*) *Raf.*
Puccinia graminis *Pers.* On wheat
Puccinia heucherae (*Schw.*) *Diet.* On Mitella diphylla *L.*
Puccinia hieracii (*Schum.*) *Mart.* On Hieracium canadense *Michx.*
Puccinia impatientis (*Schw.*) *Arth.* On Impatiens biflora *Walt.*
Puccinia malvacearum *Mont.* On Malva sp. cultv.
Puccinia menthae *Pers.* On Mentha canadensis *L.*
Puccinia obtegens (*Link*) *Tul.* On Carduus arvensis (*L.*) *Robs.*
Puccinia osmorrhizae (*Pk.*) *Cke. & Pk.* On Washingtonia longistylis (*Torr*). *Britt.*
Puccinia podophylli *Schw.* On Podophyllum peltatum *L.*
Puccinia veratri *Niessl.* On Veratrum viride *Ait.*
Puccinia violae (*DC.*) *Schroet.* On Viola sp.
Uredo agrimoniae (*Schum.*) *DC.* On Agrimonia gryposepala *Wallr.*

Uromyces caladii (*Schw.*) *Farl.* On Arisaema triphyllum (*L.*) *Torr.*
Uromyces hedysari-paniculati (*Schw.*) *Farl.* On Meibomia paniculata (*L.*) *Kuntze*
Uromyces howei *Peck.* On Asclepias syriaca *L.*
Uromyces junci (*Desm.*) *Tul.* On Juncoides pilosum (*L.*) *Kuntze*
Uromyces polygoni (*Pers.*) *Fckl.* On Polygonum aviculare *L.*
Uromyces trifolii (*Hedw.*) *Lev.* On Trifolium pratense *L.*

DACRYOMYCETALES

Dacryomycetaceae

Guepinia spatularia (*Schw.*) *Fr.*

AGARICALES

Thelophoraceae

Asterostoma albido-carneum *Massee*
Corticium pallescens (*Schw.*) *Massee*
Craterellus cantharellus (*Schw.*) *Fr.*
Hymenochaete corrugata (*Fr.*) *Lev.*
Hymenochaete rubiginosa *Lev.*
Sebacina helvelloides (*Schw.*) *Burt*
Solenia fasciculata *Pers.*
Stereum frustulosum *Fr.*
Stereum lobatum *Fr.*
Thelophora schweinitzii *Berk.*

Clavariaceae

Clavaria formosa *Pers.*
Clavaria cristata *Pers.*
Physalacria inflata *Peck*

Hydnaceae

Grandinia coriaria *Peck* (Determined by Dr H. J. Banker)
Hydnum subcarnaceum *Fr.*
Mucronella calva (*A. & S.*) *Fr.*
Phlebia hydnoides *Schw.* (Determined by Dr H. J. Banker)
Steccherinum ochraceum (*Pers.*) *Gray*
Steccherinum pulcherrimum (*B. & C.*) *Banker*

Polyporaceae

Antrodia mollis (*Sommerf.*) *Karst.*
Bjerkandera adusta (*Willd.*) *Karst.*
Bjerkandera puberula (*B. & C.*) *Murrill*
Cerrena unicolor (*Bull.*) *Murrill*
Coltricia cinnamomea (*Jacq.*) *Murrill*
Coriolellus sepium (*Berk.*) *Murrill*
Coriolus abietinus (*Dicks.*) *Quel.*
Coriolus biformis (*Klotsch.*) *Pat.*
Coriolus nigromarginatus (*Schw.*) *Murrill*
Coriolus prolificans (*Fr.*) *Murrill*
Coriolus pubescens (*Schw.*) *Murrill*

Coriolus versicolor (*L.*) *Quel.*
Daedalea confragosa (*Bolt.*) *Pers.*
Elfvngia megaloma (*Lev.*) *Murrill*
Fomes annosus (*Fr.*) *Cooke*
Fomes populinus (*Schum.*) *Cooke*
Fomes ungulatus (*Schaeff.*) *Sacc.*
Fomitiporia obliquiformis *Murrill*
Fuscoporia viticola (*Schw.*) *Murrill*
Fuscoporia ferruginisa (*Schrad.*) *Murrill*
Ganoderma tsuagae *Murrill*
Gloeophyllum hirsutum (*Schaeff.*) *Murrill*
Gloeophyllum trabeum (*Pers.*) *Murrill*
Hapalopilus gilvus (*Schw.*) *Murrill*
Hapalopilus rutilans (*Pers.*) *Murrill*
Hexagona alveolaris (*DC.*) *Murrill*
Ischnoderma fuliginosum (*Scop.*) *Murrill*
Laetiporus speciosus (*Batsch.*) *Murrill*
Lenzites betulinus (*L.*) *Fr.*
Piptoporus suberosus (*L.*) *Murrill*
Phaeolus sistotremoides (*Alb. & Schw.*) *Murrill*
Polyporus arcularius (*Batsch.*) *Fr.*
Polyporus elegans (*Bull.*) *Fr.*
Polyporus fissus *Berk.*
Porodisculus pendulus (*Schw.*) *Murrill*
Poronidulus conchifer (*Schw.*) *Murrill*
Pycnoporus cinnabarinus (*Jacq.*) *Karst.*
Pyropolyporus conchatus (*Pers.*) *Murrill*
Pyropolyporus igniarius (*L.*) *Murrill*
Pyropolyporus robiniae *Murrill*
Spongipellis borealis (*Fr.*) *Pat.*
Spongipellis galactinus (*Berk.*) *Pat.*
Tyromyces chioneus (*Fr.*) *Karst.*
Tyromyces guttulatus (*Peck*) *Murrill*
Tyromyces lacteus (*Fr.*) *Murrill*
Tyromyces semipileatus (*Peck*) *Murrill*
Tyromyces spraguei (*B. & C.*) *Murrill*

Boletaceae

Fistulina hepatica (*Schaeff.*) *Fr.*
Strobilomyces strobilaceus (*Scop.*) *Berk.*
Ceriomyces communis (*Bull.*) *Murrill*
Ceriomyces retipes (*B. & C.*) *Murrill*
Ceriomyces subtomentosus (*L.*) *Murrill*
Gyroporus castaneus (*Bull.*) *Quel.*
Suillellus frostii (*Russell*) *Murrill*
Suillellus luridus (*Schaeff.*) *Murrill*
Tylopilus felleus (*Bull.*) *Karst.*

Agaricaceae

Agaricus campestris *L.*
Agaricus placomyces *Peck*

Amanita phalloides (*Fr.*) *Quel.*
Amanita rubescens *Pers.*
Amanita verna *Bull.*
Amanitopsis vaginata (*Bull.*) *Roze*
Armillaria mellea (*Vahl*) *Quel.*
Cantharellus cibarius *Fr.*
Cantharellus aurantiacus (*Wulf.*) *Fr.*
Cantharellus cinnabarinus *Schw.*
Claudopus nidulans (*Pers.*) *Peck*
Clitocybe illudens *Schw.*
Clitocybe infundibuliformis *Schaeff.*
Clitocybe phyllophila *Fr.*
Collybia platyphylla *Fr.*
Collybia radicata *Rehl.*
Collybia velutipes *Curt.*
Crepidotus malachius *B. & C.*
Galera tener (*Schaeff.*) *Gill.*
Hypholoma appendiculatum *Bull.*
Hypoloma perplexum *Peck*
Laccaria laccata (*Scop.*) *B. & Br.*
Lactaria hygrophoroides *B. & C.*
Lactaria lactiflua (*L.*) *Burl.*
Lactaria piperata (*L.*) *Pers.*
Lactaria scrobiculata (*Scop.*) *Fr.*
Lactaria subdulcis (*Pers.*) *Fr.*
Lactaria vellerea *Fr.*
Lentinus lepideus *Fr.*
Marasmius campanulatus *Peck*
Marasmius oreades *Fr.*
Marasmius rotula *Fr.*
Marasmius urens (*Bull.*) *Fr.*
Mycena leaiana *Berk.*
Omphalia campanella *Batsch.*
Panaeolus campanulatus *L.*
Panus rudis *Fr.*
Panus stipticus *Fr.*
Pholiota praecox *Pers.*
Pleurotus ostreatus *Jacq.*
Pleurotus petaloides *Bull.*
Pluteus cervinus *Schaeff.*
Pluteus granularis *Peck*
Pluteus longistriatus *Peck*
Psathyrella disseminata *Pers.*
Psilocybe foenisecii *Pers.*
Russula emetica *Fr.*
Russula foetens *Fr.*
Russula lepida *Fr.*
Russula nigricans *Fr.*
Schizophyllum alneum (*L.*) *Schroet.*
Tricholoma rutilans *Schaeff.*

PHALLALES

Clathraceae

Phallogaster saccatus *Morgan*

Phallaceae

Dictyophora ravenelii (*B. & C.*) *Burt*

LYCOPERDALES

Lycoperdaceae

Astraeus hygrometricus (*Pers.*) *Morgan*
Lycoperdon gemmatum *Batsch*
Lycoperdon pyriforme *Schaeff.*

NIDULARIALES

Nidulariaceae

Crucibulum crucibuliforme (*Scop.*) *White*
Cyathia hirsuta (*Schaeff.*) *White*
Sphaerobolus carpobolus *L.*

SCLERODERMATALES

Sclerodermataceae

Scleroderma bovista *Fr.*
Scleroderma vulgare *Horn.*

FUNGI INPERFECTI

Melasmia acerina *Lev.*
Phyllosticta acericola *C. & E.* On Acer sp.
Phyllosticta phomiformis *Sacc.* On Quercus sp.
Phyllosticta podophylli *Wint.* On Podophyllum peltatum *L.*
Septoria aegopodii *Desm.* On Washingtonia longistylis (*Torr.*) *Britt.*
Septoria malvicola *Ell. & Mart.* On Malva rotundifolia *L.*
Septoria nabali *B. & C.* On Nabalus albus (*L.*) *Hook.*
Septoria oenotherae *B. & C.* On Oeneothera biennis *L.*
Septoria podophyllina *Peck.* On Podophyllum peltatum *L.*
Septoria polygonorum *Desm.* On Polygonum sp.
Septoria trillii *Peck.* On Trillium sp.
Septoria violae *Westd.* On Viola sp.
Sphaeropsis malorum *Westd.* On leaves of Malus malus (*L.*)
Vermicularia concentrica *Peck & Clinton.* On Trillium sp.
Vermicularia peckii *Sacc.* On Viola sp.
Coryneum kunzei *Corda.* On dead branches.
Gloeosporium lindemuthianum *Sacc. & Magn.* On beans.
Myxosporium nitidum *B. & C.* On branches of Cornus.

HYPHOMYCETES

Cercospora clavata (*Gerard*) *Cooke.* On Asclepias syriaca *L.*
Cercospora symplocarpi *Peck.* On Spathyma foetida (*L.*) *Raf.*

Cladosporium herbarum (*Pers.*) *Link*
Diplocladium minus *Bon.*
Fusicladium pirinum (*Lib.*) *Fckl.*
Isaria farinosa (*Dicks.*) *Fr.*
Oidium album *Sumstine*
Polyscytalum flavum *Sumstine*
Rhinotrichum bicolor *Sumstine*
Rhinotrichum curtisii *Berk.*
Rhinotrichum ramosissimum *B. & C.*
Scolecotrichum graminis *Fckl.* On Dactylis glomerata *L.*
Sepedonium chrysospermum *Fr.*
Sporodesmium antiquum *Corda*
Streptothrix pereffusa *Sumstine*
Tuberculina persicina (*Ditm.*) *Sacc.*
Verticillium candelabrum *Bon.*

Sterile Mycelium

Ozonium auricomum *Link*

Peabody High School,
Pittsburgh, Pa.

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